

Gelman Sciences Inc. 642 South Wagner Road Ann Arbor, MI 48103 734.436.4025 phone 734.436.4040 fax

CASE NARRATIVE

Monthly Data Gelman Sciences Project: 1,4-Dioxane Remediation

Date: February 2022

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition, all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

Gelman Sciences Inc. attests to the validity of the laboratory data generated by Gelman Sciences Ann Arbor, Michigan Environmental Laboratory facilities reported herein. All analyses performed by Gelman Science's Environmental Laboratory facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the application methods. Gelman Science's Environmental group has reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

At the end of the month some of the 1,4-dioxane samples were sent to Ann Arbor Technical Services for analysis due to a reproducibility problem. The balance of the samples was analyzed for 1,4-dioxane at Gelman Science's Environmental Laboratory. All bromate samples were analyzed by Gelman Science's Environmental Laboratory. The test results in this report meet all NELAP requirements for parameters for which accreditation are required or available. Any exceptions to NELAP requirements are noted in this report. All exceptions are noted per laboratory standard operating procedure based on EPA Method 1624c. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory.

Calculations are performed before rounding to avoid round-off errors in calculated results. The odd even rule is used for rounding. Holding times were met for all samples analyzed. Proper preservation was observed on all samples unless otherwise detailed in the individual sections below. Samples MW-54d, 72d, and 71 were recollected due to questionable results.

RECEIPT/ STORAGE

The samples were received on the days noted in the report for the Month; the samples arrived in good condition, properly preserved and on ice when necessary. Samples that require 1,4-dioxane analysis are collected in hydrochloric HCl acid-preserved vials to a pH of ≤2, except for the Pall ozone treatment samples. These samples have chemicals that, when mixed with the HCl acid, cause interferences and trap damage. Every attempt is made to analyze these samples within 24 hours of receipt.

Samples that require Bromate analysis are collected and preserved in the laboratory with ethylene di-amine and refrigerated.

Samples that are delivered to the laboratory the same day as they are collected are likely not to have reached a fully chilled temperature. This is acceptable as long as there is evidence that chilling has begun. All samples are iced or refrigerated at 4°C (±2°C) from the time of collection until sample preparation or analysis.

1,4-Dioxane (GC-MS)

All ground water and treated water samples were analyzed for 1,4-Dioxane (GC-MS) in accordance with EPA 1624C, which has been modified to enhance detection limits. Samples that were diluted to bring them within the calibrated range of the instrument are noted with a "D" under the Qualifier Code section of the data report. Reporting limits were adjusted based on each dilution.

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Reporting limit for undiluted samples is 1ppb (part per billion, micrograms per liter, µg/L). All quality control parameters were within the acceptance limits for reported samples unless indicated.

Bromate (Ion Chromatography)

All surface water and treated samples were analyzed for Bromate (Ion Chromatography) in accordance with EPA 300.1. Surrogates are added to all samples. All quality control parameters were within the acceptance limits with the balance of sample analyzed.

The reporting limit for treated samples is 5.0ppb and for surface samples is 2.0ppb.

Qualifiers

1,4-Dioxane Qualifier Codes:

Qualifier Code	Description
nd:	The compound was analyzed for, but not detected at or above the detection limit indicated.
D:	Analyte value quantified from a dilution; reporting limit is raised to reflect dilution.
E:	The compound result is greater than the upper quantitation limit in the associated calibration curve, reported as estimate.
B:	The sample vials contained air bubbles larger than 5mm, which may affect compound results.
J:	The compound was positively identified; the associated numerical value is the approximate concentration.
M:	Matrix effects, sample required dilution.
R:	The reported value is unusable and rejected due to variance from quality control criteria.
V:	The reported value is considered estimated due to variance from quality control criteria.
H:	Sample was analyzed past 14-day hold time, but within 45 days.
O:	Samples analyzed in outside laboratory.
S:	Samples split with DEQ.

Bromate Qualifier Codes:

Qualifier Code	Description
nd:	The compound was analyzed but was not detected at or above the detection limit indicated.
E:	The compound result is greater than the upper quantitation limit in the associated calibration curve.
J:	The compound was positively identified; the associated numerical value is the approximate concentration.
R:	The reported value is unusable and rejected due to variance from quality control criteria.
V:	The reported value is considered estimated due to variance from quality control criteria.
Н:	Sample was analyzed past 28-day hold time
Analyst: Gage M	. Trendel

Report Checked by: Ray Woods Date: 3/10/22

GELMAN Sciences Inc.

Sample Analysis Report

642 South Wagner Road Ann Arbor, MI 48103-9019 US 734.436.4025 phone February, 2022

Analyst Initials: GMT

Date: 3/27/27

Sample Name - Date/Time Sampled	1,4-Dioxane Results (ppb)	R.L. (ppb)	Bromate Results (ppb)	R.L. (ppb)	Bromide Results (ppb)	R.L. (ppb)	Comments	Qualifier(s
Extraction Wells								
C3	0 - 3							
DOLPH-02-18-22-11:20-1	140	5						O,D
TW-10-02-18-22-11:05-1	920	10						O,D
TW-14-02-18-22-10:55-1	120	5						O,D
TW-20-02-18-22-11:10-1	840	10						O,D
TW-24-02-24-22-11:25-1	2400	40						O,D
D2								
LB-4-02-18-22-10:20-1	470	10						O,D
TW-21-02-18-22-11:30-1	290	5						O,D
E								
TW-17-02-18-22-11:00-1	53	5						O,D
TW-18-02-18-22-11:35-1	240	5						O,D
TW-23-02-18-22-10:25-1	430	10						O,D
TW-29-02-18-22-10:40-1	340	10						O,D
Marshy								
PW-1-02-18-22-11:15-1	930	10						O,D
SW								
TW-22-02-24-22-13:00-1	430	10						O,D
TW-28-02-18-22-11:45-1	700	10						O,D

Sample Name - Date/Time Sampled	1,4-Dioxane Results (ppb)	R.L. (ppb)	Bromate Results (ppb)	R.L. (ppb)	Bromide Results (ppb)	R.L. (ppb)	Comments	Qualifier(s
C3								
MW-1 Replacement-02-24-22-13:30-1	1600	80						O,D
MW-105s-02-07-22-14:35-1	380	10						O,D
MW-18d-02-01-22-09:39-1	140	10						O,D
MW-32-02-01-22-13:05-1	13	1.0						0
MW-35-02-01-22-08:35-1	2	1.0						0
D0								
MW-142s-02-28-22-11:30-1	nd	1.0						0
MW-143i-02-28-22-14:25-1	nd	1.0						0
MW-53d-02-10-22-10:38-1	nd	1.0						0
MW-53i-02-10-22-12:02-1	43	1.0						0
MW-53s-02-10-22-09:22-1	nd	1.0						0
D2								
MW-113-02-17-22-11:12-1	140	5						0
MW-118-02-17-22-09:44-1	60	1.0						0
MW-11d-02-24-22-11:58-1	290	10						O,D
MW-121s-02-21-22-08:54-1	nd	1.0						0
MW-124s-02-22-22-10:30-1	nd	1.0						0
MW-4d-02-01-22-14:30-1	330	20						O,D
MW-54d-02-21-22-12:46-1	52	1.0						0
MW-54s-02-21-22-11:36-1	nd	1.0						0
MW-77-02-21-22-14:04-1	910	20						O,D
MW-92-02-22-12:25-1	66	1.0						0
MW-KD-1d-02-17-22-13:42-1	620	10						O,D
MW-KD-1s-02-17-22-12:32-1	160	5						O,D

Sample Name - Date/Time Sampled	1,4-Dioxane Results (ppb)	R.L. (ppb)	Bromate Results (ppb)	R.L. (ppb)	Bromide Results (ppb)	R.L. (ppb)	Comments	Qualifier(s
MW-103s-02-14-22-14:47-1	83	1.0						0
MW-105d-02-07-22-13:08-1	170	10						O,D
MW-106s-02-15-22-14:00-1	280	20						O,D
MW-108d-02-07-22-10:04-1	540	10						O,D
MW-108s-02-07-22-11:13-1	260	10						O,D
MW-112i-02-14-22-12:18-1	10	1.0						0
MW-112s-02-14-22-13:29-1	3	1.0						0
MW-121d-02-21-22-10:01-1	2	1.0						0
MW-124d-02-22-22-09:20-1	nd	1.0						0
MW-142d-02-28-22-10:14-1	nd	1.0						0
MW-143d-02-28-22-13:13-1	nd	1.0						0
MW-64-02-01-22-10:52-1	39	1.0						0
MW-76i-02-15-22-10:33-1	100	1.0						O,D
MW-76s-02-15-22-09:23-1	310	5						0
MW-81-02-15-22-12:03-1	150	5						O,D
MW-84s-02-10-22-13:53-1	280	10						O,D
SW								
MW-10d-02-24-22-10:06-1	16	1.0						0
MW-57-02-24-22-08:44-1	5	1.0						0
Surface Water								
Not Applicable								
HC/HR-02-01-22-08:50-1			nd	2.0				
HC/HR-02-02-22-09:50-1			nd	2.0				
HC/HR-02-03-22-09:55-1			nd	2.0				
HC/HR-02-04-22-10:00-1			nd	2.0				
HC/HR-02-07-22-10:25-1			nd	2.0				

Sample Name - Date/Time Sampled	1,4-Dioxane Results (ppb)	R.L. (ppb)	Bromate Results (ppb)	R.L. (ppb)	Bromide Results (ppb)	R.L. (ppb)	Comments	Qualifier(s)
HC/HR-02-08-22-10:25-1			nd	2.0				
HC/HR-02-09-22-10:20-1			nd	2.0				
HC/HR-02-10-22-09:20-1			nd	2.0				
HC/HR-02-11-22-10:30-1			nd	2.0				
HC/HR-02-14-22-09:50-1			nd	2.0				
HC/HR-02-15-22-10:15-1			nd	2.0				
HC/HR-02-16-22-09:50-1			nd	2.0				
HC/HR-02-17-22-09:50-1			nd	2.0				
HC/HR-02-18-22-10:00-1			nd	2.0				
HC/HR-02-21-22-09:20-1			nd	2.0				
HC/HR-02-22-22-09:20-1			nd	2.0				
HC/HR-02-23-22-10:50-1			nd	2.0				
HC/HR-02-24-22-10:00-1			nd	2.0				
HC/HR-02-25-22-10:20-1			nd	2.0				
HC/HR-02-28-22-11:00-1			nd	2.0				
Treatment System								
OUTFALL-02-01-22-1	6	1.0						0
OUTFALL-02-01-22-2			9.7	5.0				
OUTFALL-02-02-22-1	6	1.0						0
OUTFALL-02-02-22-2			nd	5.0				
OUTFALL-02-03-22-1	5	1.0						0
OUTFALL-02-03-22-2			nd	5.0				
OUTFALL-02-06-22-1	5	1.0						0
OUTFALL-02-06-22-2			nd	5.0				
OUTFALL-02-07-22-1	6	1.0						0
OUTFALL-02-07-22-2			5.2	5.0				
OUTFALL-02-08-22-1	6	1.0						0

Sample Name - Date/Time Sampled	1,4-Dioxane Results (ppb)	R.L. (ppb)	Bromate Results (ppb)	R.L. (ppb)	Bromide Results (ppb)	R.L. (ppb)	Comments	Qualifier(s)
OUTFALL-02-08-22-2			6.6	5.0				
OUTFALL-02-09-22-1	5	1.0						0
OUTFALL-02-09-22-2		300	nd	5.0			4-1	
OUTFALL-02-10-22-1	5	1.0						0
OUTFALL-02-10-22-2			5.8	5.0				
OUTFALL-02-13-22-1	6	1.0						0
OUTFALL-02-13-22-2			nd	5.0				
OUTFALL-02-14-22-1	7	1.0						0
OUTFALL-02-14-22-2			6.0	5.0				
OUTFALL-02-15-22-1	6	1.0				0		0
OUTFALL-02-15-22-2			nd	5.0				
OUTFALL-02-16-22-1	6	1.0						0
OUTFALL-02-16-22-2			5.0	5.0				
OUTFALL-02-17-22-1	5	1.0						0
OUTFALL-02-17-22-2			6.2	5.0				
OUTFALL-02-20-22-1	6	1.0						0
OUTFALL-02-20-22-2			nd	5.0	1			
OUTFALL-02-21-22-1	6	1.0						0
OUTFALL-02-21-22-2			5.1	5.0				
OUTFALL-02-22-22-1	6	1.0				11		0
OUTFALL-02-22-22-2			nd	5.0				
OUTFALL-02-23-22-1	5	1.0	1					0
OUTFALL-02-23-22-2			nd	5.0				
OUTFALL-02-24-22-1	6	1.0			1			0
OUTFALL-02-24-22-2			6.8	5.0				
OUTFALL-02-27-22-1	5	1.0						0
OUTFALL-02-27-22-2			6.0	5.0				1/1 =

Sample Name - Date/Time Sampled	1,4-Dioxane Results (ppb)	R.L. (ppb)	Bromate Results (ppb)	R.L. (ppb)	Bromide Results (ppb)	R.L. (ppb)	Comments	Qualifier(s)
OUTFALL-02-28-22-1	6	1.0						0
OUTFALL-02-28-22-2			6.0	5.0				
Red Pond-02-01-22-07:05-1	390	40						O,D
Red Pond-02-02-22-07:00-1	400	40						O,D
Red Pond-02-03-22-07:30-1	340	10						O,D
Red Pond-02-04-22-07:45-1	380	40						O,D
Red Pond-02-07-22-07:10-1	380	40						O,D
Red Pond-02-08-22-07:35-1	370	10						O,D
Red Pond-02-09-22-07:35-1	370	40						O,D
Red Pond-02-10-22-07:00-1	360	40						O,D
Red Pond-02-11-22-07:30-1	380	40						O,D
Red Pond-02-14-22-07:15-1	390	40						O,D
Red Pond-02-15-22-08:55-1	390	40						O,D
Red Pond-02-16-22-08:45-1	370	10						O,D
Red Pond-02-17-22-07:40-1	390	40						O,D
Red Pond-02-18-22-08:00-1	390	10						O,D
Red Pond-02-21-22-07:20-1	410	40						O,D
Red Pond-02-22-22-07:10-1	410	40						O,D
Red Pond-02-23-22-07:35-1	420	40						O,D
Red Pond-02-24-22-07:10-1	420	40						O,D
Red Pond-02-25-22-07:30-1	360	10		1				O,D
Red Pond-02-28-22-07:30-1	440	40						O,D



1,4-Dioxane by GC/MS Data Summary Sheet

ATS Project Number	G001-002.22	Percent Moisture	100.0	
ATS SDG Number	0216221	Instrument	2100V	
Client Sample ID	MW-76i	Subsample (mL)	5.000	
Laboratory Sample ID	0216221-4	Final Volume (mL)	5.000	
Matrix	Water	Dilution Factor	1	
Sample Date	02/15/2022 10:33	Basis	Wet	_
Analytical Method (USEPA)	USEPA 1624	Units	mg/L	
Preparation Method (USEPA)	USEPA 1624	Preparation Date	02/16/2022	
QC Batch Number	QCORG0216221	Analysis Date	02/16/2022 16:16:48	

Parameter	CAS#	Result	MDL	PQL	Qual
1.4-Dioxane	123-91-1	0.10	0.001		

Comments

All methods reference US EPA methods unless otherwise noted.
Calculations performed prior to rounding.
Project specific reporting limit (MDL) based upon lowest calibration standard.
M - Indicates elevated reporting limit based upon sample dilution.



1,4-Dioxane by GC/MS Data Summary Sheet

ATS Project Number	G001-002.22	Percent Moisture	100.0	
ATS SDG Number	0216221	Instrument	2100V	
Client Sample ID	MW-76s	Subsample (mL)	5.000	
Laboratory Sample ID	0216221-3	Final Volume (mL)	5.000	
Matrix	Water	Dilution Factor	5	
Sample Date	02/15/2022 9:23	Basis	Wet	
Analytical Method (USEPA)	USEPA 1624	Units	mg/L	
Preparation Method (USEPA)	USEPA 1624	Preparation Date	02/16/2022	
QC Batch Number	QCORG0216221	Analysis Date	02/16/2022 11:53:48	

Parameter	CAS#	Result	MDL	PQL	Qual
1,4-Dioxane	123-91-1	0.31	0.005		M

Office: 734-995-0995 Fax: 734-995-3731

Comments

All methods reference US EPA methods unless otherwise noted.
Calculations performed prior to rounding.
Project specific reporting limit (MDL) based upon lowest calibration standard.
M - Indicates elevated reporting limit based upon sample dilution.



Data Transmittal Cover Page

Project Name: Pall Corporation ATS Project Number: G001-002

Inorg_SRF_0202221 4505089688

Project Description: This data report contains the meutos of 4 water samples, received by ATS on February 2, 2022 to be snalyzed for 1,4-Dioxans.

Recipiant	Mr. Gage Trendel	-	Email: FAX Number:	gage frendelflipsil.com
No. of Pag	es (including cover pg.):	15		
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Katie St	Message: Copy report to: trohauer (kstrohauer@heng.con a teubella (amenda taabella@pe	n), recods@te-op	(keith patterson() erations.com, Pet	pot com), Brode, Jm (Jm, brode(fice)Lcom ers, Sue Pelers (sue, pelers@pail.com)

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ORGANIC ANALYSIS 1,4-Dioxane by GC/MS USEPA 1624

ATS Project Number: G001-002.22 ATS SDG: 0202221

Prepared By: Ann Arbor Technical Services 290 South Wagner Road Ann Arbor, MI 48103



LABORATORY OPERATIONS CASE NARRATIVE

ATS Project Number: G001-002 Report Date: 2/7/22 SRF/SDG Number(s): 0202221 Client PO Number: 4505089688

Case Narrative Summary

This case starrative applies to the following 4 samples that were received at Ann Arbor Technical Services, Inc. (ATS) on 2/2/22, and associated matrix-specific QA/QC:

Client fumple Mentification	Sample Date	Requested Turn Around Time	Amilysis	Matrix
Received 3/2/22	10000	Contract to the latest to the		
Outsitons	2/1/22	Urpers	1,4-Disame	Water
IIIFOC-IA	2002	Urgent	1,4-Diorson	Water
BIS-OG-2A	2/2/22	Urgeni	1,4-Dimene	Water
Red Ford	2/2/22	1ligest	1,4-Dissane	Water

Annt	no	Number of Samples	
	1,4-Dissano (LISEPA 1624) - Urgent TAT	 4 Samples * 1 Matrix Spike * 1 Matrix Spike Dupl 	SCAT

Sample Receipt, Chain of Custody Records, and Holding Times

Samples were delivered directly to ATS by Pall Corporation staff. Samples were received with proper cha custody records included. Sample condition and anomalies, if any, are color presented in the "Sample Re-sistent of this proper or in the commercia on individual data sheets. All samples were prepared and analyze 45 days with the following exceptions:

Nate

Controllation in Chemistry & Environmental Science 200 South Wagner Road, Ann Artor, Michigan 48103 Tel 7341905-0095 Fax 734095-3731

Data Review and Approval

All data contained in this report have been generated in secondance with guidelines provided in the set standard eist method, and are consistent with detailed procedures described in a written standard open procedures (SDF) specific to the ATE behaviory, a required by USEFA. All dates exper and many reviewed to ensure compliance with the above-referenced SDF's and applied specifications. In addition confirms to the behaviory (Vasilly Armanon (Vasilly Content Manusia).

Data Deliverables

This data package constitutes a Level II package; other data report packages (Level I, Level IV DVF, IPA RS HDD) are available upon request. There were no hardcopy data summary sheets generated for this project.

Sample Analysis

Ld-Dissanc Amigras (DCMS): Samples were analysed by purgs and imp OCMS in accordance with USEPA method 164 (Velatile Organic Compounds by busines Dilatinis Class Chrismakegraphy – Mass Specimentry). Joint Collection of the Compound of the Compounds of the Compound of t

Analytical OA/OC Summary

Calibration Verification

Method calibration was verified through the analysis of a mid-level initial calibration verification (CV) standard at a frequency of every 12 hours. All verification standards must the acceptance enteria with the following exceptions:

Instrument Blanky

QA/QC Batch Summary

Internal Standards

GH11-022.2UCN_0202221.das



Laboratory Reagent Blanks

ory reagent blank (LRB) was enalyzed with each QAQC batch. The LRB's met the seceptance criterie

Laboratory Fortifled Blanks / Laboratory Control Samples

A laboratory thriffed blank (LFB) was analyzed with each QAQC hatch. The LFB's met the acceptance criteric with the following exceptions:

Name

Name

Matrix Spikes and Spike Duplicates

A matrix spike (MS) and matrix spike displicate (MSD) was analyzed with each QA/QC batch. The MS/MSD's not the acceptance criteria with the following exceptions:

Name

Name

Matrix Replicates

Sample Dilutions

- Red Pond 2/1/22

Markalitong

Mark T. DeLong (Quality Assurance Coordinator)

Jen S. Philip II. Simon (Laboratory Director)



ANN ARBOR TECHNICAL SERVICES,

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ANN ARBOR TECHNICAL SERVICES, INC.

Granden State Description (1971 Sain Februs) LC. UCL.

Ser.

ORGANIC ANALYSIS 1,4-Dioxane by GC/MS USEPA 1624

ATS Project Number: G001-002.22 ATS SDG: 0203221

Prepared By: Ann Arbor Technical Services 290 South Wagner Road Ann Arbor, MI 48103



LABORATORY OPERATIONS CASE NARRATIVE

ATS Project Number: G001-002 Report Date: 2/7/22 SRF / SDG Number(s): 0203221 Cllent PO Number: 4505089688

Earth Age Waters | Den Last Search | CA | UA. |

NC.

ANN ARBOR TECHNICAL SERVICES,

Case Narrative Summary

This case narrative applies to the following 14 samples that (ATS) on 2/3/22, and associated matrix-specific QA/QC:

Client Sample Mertification	Sample Date	Requested Tirm Around Time	Analysis	Matrix
Received 2/3/22				5
Owtall (01)	2/2/22	Unjerti	1,4-Dioxane	Water
Red Pred	2/1/22	Urgeni	1,4-Dinasme	Water
Combination Efficient	2/1/22	tirpret	1,4-Dinxane	Water
BIT-OC-IA	20/22	Urgest	1,4-Diorese	Water
PITF-OC-2A	2/3/22	Urgani	1,4-Diorene	Water
BP-I	2002	Urgeni	1,4-Diaxane	Water
Onifuli Grals	2/1/22	Urgent	1,4-Dinxane	Water
Outfell Test	3/3/22	Urgent	1,4-Diexese	Water
MW-35	2/1/22	Urgesi	1,4-Dinasse	Water
MW-IM	2/1/22	Urgeni	1,4-Dissesse	Water
MW-64	2/1/02	Urgent	1,4-Dimase	Weter
MW-32	2/1/22	Urgers	1,4-Diosane	Water
MW-6d	2/1/22	Urgent	1,4-Dinsese	Water
Test	2/1/22	Urpent	1.4-Dioxane	Water

Controlluser in Chemistry & Environmental Science 293 South Wagner Roed, Ann Arbor, Michigan 48103 Tel 734/015-095 Fax 734/005-3731

Sample Receipt, Chain of Custody Records, and Holding Times

Cored

122

366

100

300

ANN ARBOR TECHNICAL SERVICES,

Data Review and Approval

All data contained in this report have been generated in accordance with guidelines provided in the referent standard test method, and are consistent with delabel procedures described as a welfain sealand oppossing procedures (SOF) specific to the AT-Libonatory, a response by USEPP. All dals are peer and managem reviewed to ensure compliance with the above referenced SOF's and project specifications. In addition, all onlines to the behaviory's Coultry Assurances / Quality Counted Manasia.

Data Deliverables

This data package constitutes a Level II package; other data report packages (Level I, Level IV DVP, IDA R5 IIDD) are available upon request. There were no hardcopy data summary sheets governed for this project.

Sample Analysis

L4-Discass Analysis (GCASS). Samples were analysed by purge and two GCASS in accordance with USIPA method (542 Velealite Organic Compounds by Insteps Dilution Gas Chromatography - Mass Spectrometry). An initial collaboration with at last five Verific was used to quantize (4-Discass. Samples were reported to project aspectific reporting limits. Samples were reported as mg/L.

Analytical QA/QC Summary

Calibration Verification

Instrument Blanks

G001-00221/CN 0203321-das





Data Transmittal Cover Page

Project Name: Pall Corporation ATS Project Number: G001-002 ATS Project Number: G001-002
ATS Roport Number(s): Inon_SRF_0203221
Client PO Number: 4505089688

Project Description: This data report contains the results of 14 water samples, received by ATS on February 3, 2022 to be analyzed for 1,4-Disserte.

Recipient: Mr. Oxpe Trendel No. of Pages (including cover pg.): 29 Sarah Stubblefield Email: Sarah Stubblefield FAX Number: 734-985-3731 difficient Message: Cigy report to: Paterson, Keith (beth patersons)pat.com), Brade, Jin (ilm. Inndes(pat.com) Keits (Brohwer (Intohauers)bettig com), moodes(lif-operations.com, Peters, Sies Peters (sos. paters()sost.com) Animota (balanta (paters)s Astronomy (balanta))

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2/7/22

OA/OC Batch Summary

Internal Standards

Laboratory Respent Blanks

A laboratory reagent blank (LEB) was analyzed with each QA/QC batch. The LRB's mot the acceptance criteria with the following exceptions:

Name

Name

Laboratory Fortified Blanks / Laboratory Control Samples

A laboratory fortified black (LFB) was analyzed with each QA/QC batch. The LFB's met the acceptance enteria with the following exceptions:

Near

Near

Matrix Spikes and Spike Duplicates

A matrix epike (MS) and matrix spike duplicate (MSD) was analyzed with each QAQC batch. The MS/MSD's met the acceptance criterie with the following exceptions:

Name

Name

Matrix Replicates

A matrix spike (MS) and matrix spike displicate (MSD) was analyzed with each QA-QC batch. The replicate met the acceptance criteria with the following exceptions:

None

None

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Artist AVGC Batch Number IDG Tolest Number:	USRFA 1624 c. OCORGC20322 G203221 G001-602-22		LAB	ORATORY ACCU	RACY SUM	MARY							
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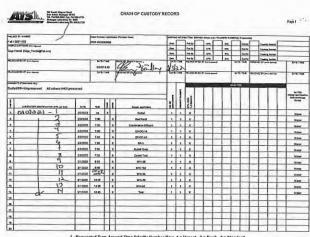
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ANN ARBOR TECHNICAL SERVICES, INC.

QUALITY ASSURANCE / QUALITY CONTROL SUMMARY LABORATORY BLANK SUMMARY

Lat Sample 10 Aralys	sia Des Analysia Tima Chamical Name	CAS	Read	Una I	Ina	Martins Deraction Limit	Reporting Develop Limit	Corres	
Laboratory Reage	nt Blank (LRB) / Method Blank (MB)				_				
Raport Date:	27/2022								
Project Number	G001-002.22								
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ANN ARBOR TECHNICAL SERVICES, INC.

QUALITY ASSURANCE / QUALITY CONTROL SUMMARY LABORATORY ACCURACY SUMMARY

Continued and the second of th

ORGANIC ANALYSIS 1,4-Dioxane by GC/MS **USEPA 1624**

ATS Project Number: G001-002,22 ATS SDG: 0204221

Prepared By: Ann Arbor Technical Services, Inc. 290 South Wagner Road Ann Arbor, MI 48103



LABORATORY OPERATIONS

ATS Project Number: G001-002 Report Date: 2/7/22 SRF/SDG Number(s): 0204221 Client PO Number: 4505089688

Case Narrative Summary

This case rurrative applies to the following 4 samples that were received at Ann Arbor Technical Services, Inc. (ATS) on 2/4/22, and associated matrix-specific OA/OC:

ġ	Direct Managele Intentifications	Sample Date	Requested Turn Around Time	Analysis	Matrix
h	seried 2/4/22	-	200		-
	Outfall 001	2002	theens	1,4-Dinsane	Water
Ī	Red Pond	2/4/22	Lingent	1,4-Dioxens	Water
	EIF-OC-IA	2/4/22	Urgent	1,4-Divense	Water
	IIII-OC-2A	2/4/22	Urgeni	1,4-Dioxese	Water

Number of Semples

• 4 Semples + 1 Matrix Spike + 1 Matrix Spike Duplipaie

Sample Receipt, Chain of Custody Records, and Helding Times

Samples were delivered directly to ATS by Pall Corporation staff. Samples were exceived with proper che custody records included. Sample conditions and anomalies, if any, we either presented in the "Sample Revision of the report or in the comments to included and such as All samples were prepared and any comments or including data sheets. All samples were prepared and many

Consultants in Chemistry & Environmental Science 280 South Wagner Road, Ann Arbor, Nichigan 48103 Tel 734595-0005 For 734595-3731

Data Review and Approval

All data contained in this report have been generated in secondance with guidelines provided in the reference studied less method, and are constants with detailed procedure described in a written standed operating procedures (SOP) specific to the ATSI absounces, a responded by USEPA. All dies to peer and messages reviewed to ensure compliance with the above referenced SOPP and project specifications. In addition, all conform to the behaviors? Quality Assessment (Justify Content Manuals.

A single QA/QC batch is defined as no more than 20 samples excluding method blanks (MB, LRII), fortified blan (BS, LFB, LCB), matrix spikes (MS, SPK), and duplicates whether spiked or native (MSD, SPK DUP, DUP, LR).

Data Deliverables

This dels package constitutes a Level II package; other data report packages (Level I, Level IV DVP, EPA RS EDD) see available upon request, There were so hardcopy data summary alicets generated for this project.

Sample Analysis

1.4-Diesno Anniysis (ICCMS): Samples were easilysed by purge and tray GCMS in accordance with USEPA method 16.4 (Valuallis Organic Compounds by Insinge Dilution Gas Chromistography – Man Nyoutoursky). An initial collibration with a least for levels was used to quantize 1,4-Dissane. Samples were reported to project specific reporting limits. Samples were reported as ingit.

Anomalies Noted:
Note

Analytical OA/OC Summary

Calibration Verification

Instrument Blanks

OA/OC Batch Summary

Internal Standards



Laboratory Reagent Blanks

A laboratory reagent blank (LRB) was analyzed with each QA/QC basel. The LRB's met the with the following exceptions:

None

None

Laboratory Fortified Blanks / Laboratory Control Samples

A laboratory fortified blank (LFB) was analyzed with each QA/QC batch. The LFB's met the acce with the following exceptions:

News

Matrix Spikes and Spike Displicates

A matrix spike (MS) and matrix spike displicate (MSD) was analyzed with each QA/QC batch. The MSA/SD's met the acceptance enteria with the following exceptions:

Name

Name

Matrix Replicates

A matrix spike (MS) and matrix spike displicate (MSD) was analyzed with each QAQC botch. The replicate me the cooplance orients with the following exceptione:

None

None

Sample Dilptions

Samples containing compounds at concentrations above the initial calibratio those compounds. The following samples were diluted for 1,4-Dinkane:

+ Red Pend 2/4/22

Mockalakong

/ February 7, 2022

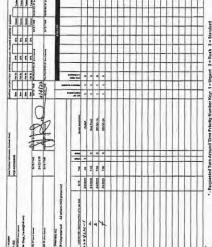
Mark T. DeLong (Quality Assumnce Coordinator)

See S.S Philip B. Simon. (Laboratory Director)

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Data Transmittal Cover Page

Project Name: Pall Corporation ATS Project Number:

Inorg_SRF_0207221 4505089688 ATS Report Number(s): Client PO Number:

This data report contains the results of 8 water semples, received by ATS on February 7, 2022 to be analyzed for 1,4-Dioxane.

Recipient	Mr. Gage Trendel	_	Email: FAX Number:	com trendel@axl.com
No. of Pag	ges (including cover pg.):	10		
From:	Sarah Slubblefield	Email: FAX Number:		eld@AnnArborTechnicalServices.com
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2/14/22



ORGANIC ANALYSIS 1,4-Dioxane by GC/MS USEPA 1624

ATS Project Number: G001-002.22 ATS SDG: 0207221

Prepared By: Ann Arbor Technical Services 290 South Wagner Road Ann Arbor, MI 48103



LABORATORY OPERATIONS CASE NARRATIVE

ATS Project Number: G001-002 Report Date: 2/14/22 SRF / SDG Number(s): 0207221 Client PO Number: 4505089688

Case Narrative Summary

This case narrative applies to the following 8 samples that were received at Ann Arbor Technical Services, Inc. (ATS) on 2/7/22, and associated matrix-specific QA/QC:

Clerat Sample Mestalication	Sample Date	Requested Turn Atoms! Time	Anilysis	Matrix
Received 2/7/22				
Ourfall 001	24/22	Urgent	1,4-Dinsens	Water
Red Pond	2/7/22	Lirgant	1,4-Dinstre	Water
Combination l'Morat	נמחב	Urgent	1,4-Distant	Water
Eff-OC-1A	20/22	Urgeni	1,4-Dintann	Water
RIT-OC-2A	2002	Ungent	1 ₃ 4-Dimane	Water
10%	2/1/22	Urgen	1,4-Dissans	Water
Outfall Grah	2/1/02	Dyest	1,4-Dissame	Water
Octfall Test	2/7/22	Tions	I A Diverse	Water

Upon receipt samples were scheduled for the following analyses

Anthrais

• I,4-Diovania (USDPA NC4) – Urgeni TAT

• I Sacquite + I Matrix Spike + I Matrix Spike + I Matrix Spike Deplicate

Sample Receipt, Chain of Custody Records, and Holding Times

Samples were delivered directly to ATS by Pall Corporation staff. Samples were received with proper chair causioly scoreds included. Sample condition and anomalies, if any, are either presented in the "Sample Received for the profession of the report or in the currentum on milvidual data sheets. All samples were prepared and analyzed 55 days with the following exceptions:

Name

Comultums in Chemistry & Euveronmental Science 250 South Wagner Road, Arm Arbor, Microgan 42103 Tel 734/95-095 Fax 734/95-3731

Data Review and Approval

All data contained in this report have been generated in accordance with guidelines provided in the relic standard test method, and are consistent with detailed procedures described in a verifice standard operar procedures (SGN) specific to the ATE Laboratory, no require by USEN2. All does are per and man-reviewed to ensure compliance with the above referenced SGN* and pupier specifications. In addition confirm to the University O Casilly Assurates O Coulty Control Mensals.

Data Dellycrables

This data package constitutes a Level II package; other data report packages (Level I, Level IV DVP, EPA RS EDD) are available upon request. There were so handcopy data summary shorts generated for this project.

Sample Analysis

L4-Distance Ambysis (OCMS): Samples were malyzed by purge and tray OCMS in accordance with USEPA method 1634 (Volatile Organic Compounds by Integer Dilution Gia Chromatography – Mass Spectementy). An initial callabration with a least five levels we used to quantitise [4,4-Hioxanc, Samples were reported to proper specific reporting limits. Semples were reported at mg/L.

Assmaller Noted:
Nune

Analytical OA/QC Summary

Calibration Verification

Method calibration was verified through the analysis of a mid-level initial calibration verification (CV) standard at a frequency of every 12 hours. All verification standards not the scorptance criteria with the following exceptions:

Neat

Instrument Blanks

OA/OC Batch Summary

Internal Standards

-CRO1-012.21/CN 0207221.dog



Laboratory Rescent Blanks

A laboratory reagent black (ERII) was enalyzed with each QA/QC beack. The ERII's mer the acceptance criteria with the following exceptions:

Next:

Laboratory Fornified Blanks / Laboratory Control Samples

A laboratory fortified blank (LFB) was analyzed with each QA/QC batch. The LFB's met the acceptance criteria with the following exceptions:

Matrix Spikes and Spike Duplicates

A matrix spike (MS) and matrix spike displicate (MSD) was analyzed with each QA/QC batch. The MS/MSD's met the acceptance criteria with the following exceptions:

Name

Name

Matrix Replicates

A matrix spoke (AS) and matrix spike duplicate (MSD) was analyzed with each QA/QC botch. The replicates set the acceptance crisers with the following exceptions:

Nume

Nume

Sample Dilutions

/ February 14, 2022

• Red Prod 2/6/22

Markalitong

Mark T. DeLong (Quality Assurance Coordinator)

235,2 Philip B. Simon (Laboratory Director)



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ORGANIC ANALYSIS 1,4-Dioxane by GC/MS **USEPA 1624**

ATS Project Number: G001-002.22 ATS SDG: 0208221

> Prepared By: Ann Arbor Technical Services, Inc. 290 South Wagner Road Ann Arbor, MI 48103



LABORATORY OPERATIONS CASE NARRATIVE

ATS Project Number: G001-002 Report Date: 2/14/22 SRF / SDG Number(s): 0208221 Client PO Number: 4505089688

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ANN ARBOR TECHNICAL SERVICES,

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Case Narrative Summary

This case remnitive applies to the following 12 samples that were received at Ann Arber Technical Services, Inc. (ATS) on 2/8/22, and associated murits-specific QA/QC:

Client Sneeple Identification	Sample Date	Requested Turn Around Time	Analysis	Metris
Received 20072				
Outfelt 001	2/7/22	Urgeni	1,4-Dissesse	Water
Red Pond	2/4/22	Uegani	1,4-Director	Water
Combination Efflored	28/22	Digest	1,4-Director	Water
RIFOC-1A	2/8/22	Urent	1,4-Dinsane	Water
fill-OC-2A	2/4/22	Uneral	1,4-Dinsens	Water
RE-I	2/1/22	Urgeni	1,4-Dioxage	Water
Outfall Grah	2/8/22	Urgeri	1,4-Dioxene	Water
Outfull Test	2/8/22	Urgent	1,4-Dinaure	Water
MW-1084	2002	Standard	1,4-Dinsann	Water
MW-10%	3/7/02	Standed	1,4-Disasse	Water
MW-1054	2/1/22	Sheeled	1,4-Dissane	Water
MW-Ins	2/7/22	StepAerd	1.4-Dissane	Water

Upon receipt samples were scheduled for the following analyses

0001-00225/CN_0000221-dec

Consulturity in Chemistry & Emtremental Science 200 South Wagner Road, Ann Arbor, Michigan 40103 Tol 734/935-0005 Fax 734/905-3731

Sample Receipt, Chain of Custody Records, and Holding Times

20 to 10

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ANN ARBOR TECHNICAL SERVICES,

Arsell.

Samples were delivered directly to ATS by Pall Corporation staff. Samples were received with garper claim of custody records included. Sample condition and anomalies, if any, are critice presented in the "Sample Receipt" exception of this report is in the comments on individual data sheets. All samples were prepared and analyzed with 45 days with the following exceptions:

Name

Data Review and Approval

All data contained in this report have been generated in accordance with guidelines provided in the referenced standard test method, and are consistent with defaulte procedures described in a written standard operating procedures (2009) superficit to take YSL abstancey, as required by SUBIFA. All data are pero and management reviewed to ensure compiliates with the above referenced SDP's and project specifications. In addition, all de-continue to the short-only Cuttilly Assurance (Quality Consoli Assuras).

A single QAQC batch is defined as no more than 20 samples excluding method blanks (MB, LRB), fortified blanks (BS, LFB, LCS), matrix spikes (MS, SPK), and displicates whether spiked or native (MSD, SPK DUP, DUP, LR).

Data Deliverables

Sample Analysis

LA-Dimanc Analysis (GCMS): Samples were analyzed by purps and trap GCMS in accordance with USIIPA, method 1624 (Volunio Organic Compounds by Instrupe Dilution Gas Chromatography - Mass Spectrometry). An inside calibration with a test for Ever's was used to quantizate 1,4-Distance, Samples were reported to project specific reporting limits. Samples were reported as mg/s.

Anomalies Noted: None

Analytical OA/OC Summary

Calibration Verification

Method calibration was verified through the analysis of a mid-level initial calibration vertification (CV) standard at a frequency of every 12 hours. All verification standards not the acceptance criteria with the following exceptance:

None

None

Instrument Blanks

0001-002.21 /CN_0000223 Ave





Data Transmittal Cover Page

Project Name: Pall Corporation ATS Project Number: G001-002 ATS Report Number(s): Inorg_SRF_0208221 Client PO Number: 4505089688

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From:	Serah	Stubblefield	Emelt:	Sarah Slubblefe	eld@AnnArborTechnicalServices.com
	Serior Chi	rest/Lab Manager	FAX Number:	734-906-3731	
Additional I					pall.com), Brode, Jim (Jim_brode@pall.com)
				orations.com, Pet	ers, Sue Paters (sue_petersffpoll.com)
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OA/OC Batch Summary

Internal Standards

Internal standards areas and retention times met the acceptance criteria with the following

None

Laboratory Reagent Blanks

A laboratory reagent blank (LRB) was unalyzed with each QA-QC batch. The LRB's met the acception:

Name

Laboratory Fortified Blanks / Laboratory Control Samples

A laboratory facilified blank (LFB) was analyzed with each QA/QC betch. The LFB's met the at with the following exceptions:

Note:
Note:

Matrix Spikes and Spike Duplicates

A matrix spake (MS) and matrix spike duplicate (MSD) was analyzed with each QA-QC batch. The MSAMSD's met the acceptance criteris with the following exceptions:

Name

Name

Matrix Replicates

A nostric spike (MSI) and matrix spike duplicate (MSD) was analyzed with each QA/QC batch. The replicates met the acceptance criteria with the following exceptance:

None

None

Sample Dilutions

- Iteri Pond 2/8/22
 MW-188d 2/7/22
 MW-188a 2/7/22
- MW-1854 2/7/22
 MW-1854 2/7/22



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QUALITY ASSURANCE / QUALITY CONTROL SUMMARY

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ANN ARBOR TECHNICAL SERVICES, INC.

QUALITY ASSURANCE / QUALITY CONTROL SUMMARY LABORATORY ACCURACY SUMMARY

Method:	USEPA 1524											
QAYOC BIRCH NUMBER	QCCRG0208221											
500	0206221											
Project Number	G001-002.22											
Report Date:	2/14/2022											
Matrix Spike Dop	licate (MSD)											
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ANN ARBOR TECHNICAL SERVICES, INC.

QUALITY ASSURANCE / QUALITY CONTROL SUMMARY

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* - Requested Turn-Around Time Priority Number Key: 1 = Urgent 2 = Rush 3 = Standard



ANN ARBOR TECHNICAL SERVICES, INC.

DAVIGE Earth Nur	ther: 0004G022822					
103	0208221					
Project Number:	G001-002.22					
Report Date:	2/14/2022					
Laboratory Re	agent Blank (LRB) / Method Blank (MB)	_	-		

Commands
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ANN ARBOR TECHNICAL SERVICES, INC.

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ORGANIC ANALYSIS 1,4-Dioxane by GC/MS USEPA 1624

ATS Project Number: G001-002.22 ATS SDG: 0209221A

Prepared By: Ann Arbor Technical Services, Inc. 290 South Wagner Road Ann Arbor, MI 48103



LABORATORY OPERATIONS CASE NARRATIVE

ATS Project Number: G001-002 Report Date: 2/14/22 SRF / SDG Number(s): 0209221-A Cllent PO Number: 4505089688

Case Narrative Summary

This case nametive applies to the following 8 samples that were received at Ann Arbor Technical Services, Inc. (ATS) on 25/02, and associated metrix-specific QA/QC:

imples	-			
Client Sample Identification	Spenyle Date	Requested Torn Around Time	Analysis	Matrix
Received 2/9/22				
Outfall (0)	2/4/22	Ugest	1,4-Dissesse	Water
Red Food	2/4/22	Urgeni	1,4Diarane	Water
Combination Effluent	2/9/23	theent	1,4-Diovane	Water
PIT-OC-1A	7/4/22	Higgest	i,4-Dintane	Water
FIE-OC-2A	2/9/07	Digret	1,4-Dinxane	Water
DP-1	2/9/22	Migrei	1,4-Dinuane	Water
Outfall Grah	2/9/22	Urgen	1,4-Dioxane	Water
Outfall Test	2/9/22	Urgeni	1,4-Dissane	Water

Sample Receipt, Chain of Custody Records, and Holding Times

Samples were delivered directly to AT3 by Pall Corporation stoff. Samples were received with proper chain of custody records included. Sample condition and associates, if any, are other presented in the "Sample Receipt" section of that report or in the connectes oil addividual data about. All samples were prepared and analyzed with 45 days with the following exemplemen.

Consultants in Chemistry & Environmental Science 290 South Wagner Raid, Ann Arbor, Michigan 45103 Tel 734995-0005 Fax 734995-3731

Data Review and Approval

All data contained in this report have been generated in accordance with guidelines provided in the standard feat method, and are consistent with detailed procedures described in a written asterdard one procedures (Schriber) specific to the AT-Laboratory, as required by USEPA. A fide has are per and in reviewed to curse compliance with the above retrement SOP's and project appetitizations, in additionation with the above retrement SOP's and project appetitizations, in additionation to the laboratory's Cuntilly Assessment (PositiV) Cuntilly Manuals.

A single QA/QC lutch is defined as no more than 20 samples excluding method blanks (MB, L/RB), fortified blank (BS, L/RB, L/CS), matrix spikes (MS, SPK), and displicates whether spiked or native (MSD, SPK DUP, DUP, LR).

Data Deliverables

This data package constitutes a Level II package; other data report packages (Level IV DVP, RPA R5 EDD) are available upon request. There were no handsopy data automatry shorts generated for this project.

Sample Applyals

[A-Distance Analysis (GCMS): Sampler were analyzed by purge and rap GCMS in accordance with USEPA method 16/4 (Volutio Organic Compounds by Justines Distance Distance Properties of the Spectrometry). As initial calibration with at feat fire levels was used in quantitate 1,4-Distance. Samples were reported to project specific reporting limits. Samples were reported on mg/L.

Anomalies Noted:

Nane

Analytical OA/OC Summary

Calibration Verification

OA/OC Batch Summary

Internal Standards

G001-002-22/CN 0309321-ivo



Laboratory Reagent Blanks

A laboratory reagest black (LRB) was analyzed with each QA/QC batch. The LRB's each the as with the following exceptions:

Neae

Laboratory Fortified Blanks / Laboratory Control Samples

A laboratory fortified black (LPB) was malyized with each QA/QC batch. The LPB's met the accept with the following exceptions:

None

None

Matrix Spikes and Spike Duplicates

A matrix spike (MS) and matrix spike duplicate (MSD) was analyzed with each QArQC hatch. The MS/MSD's m the acceptance criteria with the following exceptions:

Name

Name

Matrix Replicates

A matrix spike (MS) and matrix spike deplicate (MSD) was analyzed with each QA/QC batch. The replicates mot the acceptance criteria with the following exceptions:

None

None

Sample Dilutions

• Red Food 2/9/22

Markackong

Mark T. DeLong (Quality Assurance Coordinator)

Philip B. Simon (Laboratory Director)

AUS.

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ANN ARBOR TECHNICAL SERVICES, INC.

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LABORATORY OPERATIONS CASE NARRATIVE

ATS Project Number: G001-002 Report Date: 2/14/22 SRF / SDG Number(s): 0209221-B Client PO Number: 4505089688

Case Narrative Summary

This case narrative upplies to the following 13 samples that were received at Ann Arbor Technical Services, Inc. (ATS) on 29/22, and associated matrix-specific OA/DC:

Client Sample Mentification	Sample Date	Respected Turn Armed Time	Analysis	Metre
Reveived 20022				
PWS IC	2/8/22	Standard	1,4-Distance	Water
PWS 15	2/4/22	Standed	1,4-Direase	Water
PWS IN	2/6/22	Steedard	1,4-Distant	Water
PWS 2C	2/1/22	Standard	1,4-Derseye	Water
PW3 2N	2/8/22	Standard	1,4-Diamen	Water
PWS 1S	2/9/22	Standard	1,4-Distant	Water
PWS 4C	2/9/22	Storeland	1,4-Dioxane	Weier
PW3.45	201722	Standard	1,4-Diment	Water
PWS SC	2/9/22	Standard	[,4-Distant	Water
PWN 511	2/9/22	Steedard	1,4-Dissanc	Water
PWS5W	2/9/22	Similard	1,4-Dissess	Water
PWSICFD	2/4/22	Standard	1,4-Diessee	Water
PWS ID FR	2/4/22	Standard	1,4-Diosano	Weter

ANN ARBOR TECHNICAL SERVICES, INC.

Sample Receipt, Chain of Custody Records, and Holding Times

[3

PAY NO

A 25.00

300

Samples were delivered directly to ATS by Pall Corporation staff. Samples were received with proper chain of controls practical healthdr. Sample condition and association, if any, are night presented in the "Sample Recognition Control of the Comments on individual data sliers. All samples were prepared and enalyzed wit 45 days with the following exceptions:

Name

Data Review and Approval

All date contained in this report have been generated in second-nee with guidelines provided in the artirescent standard test method, und are considered with detailed procedures described in a written standard operating procedures (GOP) specific to the ATS Laterhamy, a required to LSUPLY. All data are green call nemergeners reviewed to custors complisions with the above referenced SOP's and project operations. In addition, all date continues that Methods Procedures of Conference and Procedures and Review Conference of Conference and Procedures and Section of the Methods Procedures and Section of Conference of Conference and Procedures and Section of Conference of Conference and Procedures and Section of Conference of Con

A single QA/QC batch is defined as no more than 20 samples excluding method blanks (MB, LRB), fortified blank (BS, LFB, LCS), matrix spikes (MS, NFS), and deplicates whether spikes or savive (MSD, SFK DUP, DIP, LR).

Data Deliverables

This data package constitutes a Level II package; other data report packages (Level I, Level IV DVP, RPA RS EDD) are available upon request. There were no hardcopy data summary shorts generated for this project.

Sample Analysis

J.4-Dietzene Antibitis (GCMS): Samples were unalyzed by purge and trap GCMS in accordance with USEPA method 1634 (Volatile Organic Compounds by Instance Dilation Gus Chromatingraphy – Mass Spectrometry). A infinit cubestions with a transfer five Sevets was used to quantitate 1.4-Dietzene. Samples were reported to project specific reporting limits. Samples were reported on project specific reporting limits.

Analytical OA/OC Summary

Calibration Verification

Method calibration was verified through the analysis of a mid-level initial calibration verification (CV) standard at a frequency of every 12 hours. All verification standards not the acceptance criteria with the following exceptions:

None

None

Instrument Blanks

Low system background was demonstrated through the analysis of instrument blanks at a mini-hums. All instrument blanks met the acceptance criteris with the fullowing exceptions:

Name

Name

(30) 402 224CN (CRICZ116.6w





Data Transmittal Cover Page

Project Name: Pall Corporation ATS Project Number: G001-002
ATS Report Number(s): Inorg_SRF_0209221_B
Client PO Number: 4505089688

Project Description: This data report contains the results of 13 water samples, received by ATS on February 9, 2022 to be analyzed for 1,4-Discone.

Recipient	Mr. Gage	Trandel		Email: FAX Number:	place_transfel@poll.com
No. of Pag	es (includin	g cover pg.):	25		
From:		Stubblefield mat /Lab Manager	Email: FAX Number:	Sarah Stubblefin 734-995-3731	elattAnnArborTechnicalServices.com
			m), rwoods@lv-ap		tpell.com), Brode, Jim (jim_brede@pail.co ers, Sue Peters (sue_peters(tpail.com)
=					
				100	

Onto: 2/14/22



ORGANIC ANALYSIS 1,4-Dioxane by GC/MS USEPA 1624

ATS Project Number; G001-002.22 ATS SDG: 0209221B

Prepared By: Ann Arbor Technical Services, Inc. 290 South Wagner Road Ann Arbor, MI 48103

OA/OC Batch Summary

Internal Standards

Internal standards areas and retention times met the acceptance criteria with the following exceptions:

- Name

Laboratory Reagent Blanks

A laboratory reagest blank (LRII) was analyzed with each QA/QC betch. The LRII's not the acceptance criteria with the following exceptions:

Name

Name

Laboratory Fortified Blanks / Laboratory Control Samples

A laboratory furtified blank (LFB) was analyzed with each QAIQC buich. The LFB's met the acceptance criteria with the following asceptions:

Note:
Note:

Matrix Spikes and Spike Duplicates

A matrix spike (MS) and matrix spike duplicate (MSD) was analyzed with each QA/QC betch. The MS/MSD's mot the acceptance criteria with the following exceptions:

Nume

Nume

Matrix Renlicates

A matrix epike (MS) and matrix epike duplicate (MSD) was analyzed with each QA/QC batch. The replicates net the acceptance criteria with the following exception:

None

None

Sample Dilutions

Mark T. DeLong (Quality Assurance Coordinator)

Starte S. / Echnury 14, 2022

G001-002-22/CN 02092210-dec



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QUALITY ASSURANCE / QUALITY CONTROL SUMMARY

					LABORATORY ACCU	RACY SUMI	MARY							
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ANN ARBOR TECHNICAL SERVICES, INC.

QUALITY ASSURANCE / QUALITY CONTROL SUMMARY LABORATORY PRECISION SUMMARY

Metrod. GAIGC Batch No.		PA 1824 #G00208221									
tog		2218									
Project Number:		1-002.22									
Report Date:	214	2522									
Matrix Spike	(MS) / Mat	rtx Spike I	DupScate (MSD)								
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Prepared By: Am Arbor Technical Service 290 South Wagner Ros ATS Project Number: G001-002.22 ATS SDG: 0210221A ORGANIC ANALYSIS 1,4-Dioxane by GC/MS USEPA 1624



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ANN ARBOR TECHNICAL SERVICES, INC.

QUALITY ASSURANCE / QUALITY CONTROL SUMMARY LABORATORY BLANK SUMMARY

SDG Project Number:	00092	219								
Facort Dotte:	2142	022								
aboratory Rea	gent Bla	nk (LRB) /	Method Blank (MB)							
Laboratory Rea	-	200		CAS	Arad	lua l	ım İ	Petrod Desector Lord	Reporting Delegion Limit	Commen

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ANN ARBOR TECHNICAL SERVICES, INC.

QUALITY ASSURANCE / QUALITY CONTROL SUMMARY LABORATORY ACCURACY SUMMARY

Vetot	USEPA 1624											
GAYOC Butch Number	er: OCORG0209221											
503	62092218											
Project Number:	6001-002.22											
Paport Date	214/2022											
aboratory Fort	ified Blank (LFB) /	Laboratory Control 5	Sample (LCS)									
Las Sample D Ave	ayea Cara Anayea Time	Onemical Name	cus	Corestration	Spin Added	Messyed Committees	vo	ter	Perseit Resovery	LCL.	va	Connects

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ANN ARBOR TECHNICAL SERVICES, INC.

QUALITY ASSURANCE / QUALITY CONTROL SUMWARY

LABORATORY ACCURACY SUMMARY

Comments
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Franchises on the report of \$10.00 to least our bright \$1.00.00.

LABORATORY OPERATIONS CASE NARRATIVE

ATS Project Number: G001-002 Report Date: 2/14/22 SRF/SDG Number(s): 0210221-A Client PO Number: 4505089688

Case Narrative Summary

This case paintive applies to the following 8 samples that were received at Aan Arbor Technical Services, Inc. (ATS) on 2/10/22, and associated matrix-specific QA/QC:

emples				
Client Sample Identification	Sample Date	Requested Turn Around Time	Analysis	Matrix
Excelled 2/10/22				
Outfall (to)	2/9/23	Urgent	1,4-Dinesse	Water
Red Food	2/10/22	Urgett	1,4-Dinsane	Water
Combination (Effluent	2/10/22	Uegent	1,4-Dintent	Water
HIT-OC-1A	2/(6/22	Urgent	1,4-Dioxses	Water
EIR-OC-2A	2/10/22	thent	1.4-Diname	Water
10-1	2/10/22	Urgent	1,4-Distance	Water
Chatall Closh	2/19/22	tlegent	1,4-Diorece	Water
Outfall Test	2/16/22	Liveret	1.4-Dirame	Water

ceipt samples were scheduled for the following analyse

Sample Receipt, Chain of Custody Records, and Holding Times

Samples were delivered directly to ATS by Pall Corporation staff. Samples were re-custedly records included. Sample condition and somaliss, if any, are either peaces

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Consultants in Chemistry & Environmental Science 290 South Wagner Road, Ann Arbor, Michigan 481(0) Tel 734595-0905 Fax 734905-3731

Data Review and Approval

All this contained in this report have been permissed in accordance with guidelines previous-sized for test mechanisms of the property of the previous (SGP) and project size that ATS accounts you required SGP). And opposit so the ATS accounts you required sized SGP and project specifications. It was not previously support of the ATS accounts of the property of the ATS accounts of the property of the ATS accounts of th

A single QAQC batch is defined as no more than 20 samples excluding method blanks (MII, LRII), fortified blank (BS, LPB, LCS), matrix ankes (MS, SPK), and dualicates whether maked or native (MSD, SPK DUP, DUP, LR).

This data prickage constitutes a Level II package; other data report packages (Level I, Level IV DVP, EPA RS BDD) are available upon request. There were no hardcopy data summary about generated for this project.

Anomalies Noted

Analytical QA/QC Summary

Calibration Verification

Instrument Blanks

QA/QC Batch Summery

Internal Standards

OS01-003-22/CN 0210221-4m

ANN ARBOR TECHNICAL SERVICES, INC.

Res | Units | Base |

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Laboratory Reagent Blanks

A laboratory reagons blank (LRB) was unabyzed with each QA/QC batch. The LRB's not the swift the following exceptions:

Name

Name

Laboratory Fortified Blanks / Laboratory Control Samples

A laboratory furtified blank (LPB) was analyzed with each QA/QC botch. The LPR's met the act with the following exceptions:

None

Matrix Spikes and Spike Duplicates

A matrix spike (MS) and matrix spike duplicate (MSD) was analyzed with each QA/QC batch. The MS/MSD's met the acceptance criteria with the following exceptions:

None

None

Matrix Replicates

A metrix spike (MS) and matrix spike duplicate (MSD) we met the acceptance criteria with the following exceptions: Name

Sample Dilutions

Rod Pond 2/9/22

Markalatong

Mark T. DeLong (Quality Assurance Coordinator)

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LABORATORY OPERATIONS

ATS Project Number: G001-002 Report Date: 2/14/22 SRF / SDG Number(s): 0211221 Client PO Number: 4505089688

Case Narrative Summary

This case narrative opplies to the following 8 samples that were received at Ann Arbor Technical Services, Inc. (ATS) on 2/11/22, and associated matrix-specific QA/QC:

Client Semple Mentification	Nample Date	Required Turn Around Time	Analysis	Matrix
Revised 2/11/22			-	
Chatel (00)	2/10/22	Digest	1,4-Dinnann	Water
Hed Find"	2/11/72	Dirpost	1,4-Dienane	Water
IVF-OC-LA	2/11/22	Higest	1,4-Dissame	Water
PIF-OC-2A	2/11/22	Urgent	1,4-Dinnane	Water
MW-535	2/10/22	Standard	1,4-Diname	Water
MW-53D	2/10/22	Standard	1,4-Dinsene	Water
MW-531	2/11/22	Standard	1,4-Dourane	Water
MW-845	2/10/22	Mantagl	1,4-Dissane	Water

Upon receipt samples were scheduled for the following analyses

Δt	olisis	N	mber of Samules
	1,4-Dioxane (USEPA 1624) - Lirgent TAT		A Samples + 1 Matrix Spike + 1 M
	1 4 Principa (PETPA 1634) - Stanfard TAT		d Camples

Samplus were delocated desety to ATS by Pall Corposition staff. Samplus were received with proper claims of catalogues were received with proper claims of catalogues controlled. Sample confines and carmedia, if say, or either greatmen in the "Sample Recoigs" section of this report or a the comments on individual date sheets. All samples were prepared and analyzed with drip with the Salling exceptions.

New York of the Confirm of the Conf

Cuntilizants in Chemistry & Environmental Science 200 South Wagner Road, Ann Arbert, Michigan 48103 Tel 734/095-4095 Fax 734/095-3731

Data Review and Approval

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ANN ARBOR TECHNICAL SERVICES,

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ontained in this report have been generated in accordance with guidelines provided in the reference est method, and are consistent with detailed procedures described in a written standard operating (SONs) specific in the ATS Laboratory, a required by USEINA. All data are pre- and managam to ensure compliance with the above referenced SOTs and project specifications. In adultion, all the faboratory (Supilly Assuments (Omity Control Managam).

A single QAQC batch is defined as no more than 20 samples exchading method blanks (MB, LRB), fortified blank (BS, LFB, LCS), matrix spikes (MS, SPK), and duplicates whether spiked or native (MSD, SPK DUP, DUP, LR).

Sample Analysis

Le-Dioxane Ancheis (GCMS): Sumples were analysed by purge and top GCMS in accordance with USIPA method 164 Volutile Organic Compounds by Interpo Dilation Gas Chromategraphy—Mass Spectmentry). An initial callilation while at least five levels was used to quantitate 1,4-Dioxane. Samples were reported to project appeal for reporting limits. Samples were reported as mpt.

Analytical OA/OC Summary

Calibration Verification

Method calibration was verified through the analysis of a mid-level initial cultivation verification (CV) standard at a frequency of every 12 hours. All verification standards met the acceptance criteria with the following exceptions:

Name

Name

Instrument Blanks

Low system background was demanstrated through the analysis of instrument blanks as a minimum of every 12 hours. All instrument blanks are the acceptance criteris with the following exceptions:

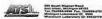
OA/OC Batch Summary

Internal Standards

ion times met the acceptance criteria with the following exceptions:

G001-012.21/CN_0211221.64





Data Transmittal Cover Page

Project Name: Pall Corporation ATS Project Number: G001-002
ATS Report Number(s): Inorg_SRF_0211221
Client PO Number: 4005089688

Project Description: This data report contains the results of 8 water samples, repowed by ATS on February 11, 2022 to be analyzed for 1,4-Dioxans.

Recipient: Mr. Carps Trendel gage_trendel@gatLogm al Massage: Copy report to: Patterson, Keith (keith patterson/figali.com), Brode, Jim (im brode/fipali.com) 3480

IF YOU DO NOT RECEIVE ALL PAGES OF THIS TRANSMITTAL, PLEASE CALL 754-09

2/14/22



ORGANIC ANALYSIS 1,4-Dioxane by GC/MS **USEPA 1624**

ATS Project Number: G001-002,22 ATS SDG: 0211221

Prepared By: Ann Arbor Technical Services, Inc. 290 South Wagner Road Ann Arbor, MI 48103

Laboratory Reagent Blanks

A laboratory reagent blank (LRII) was analyzed with each QAQC batch. The LRII's met the acceptance criteria with the following exceptions:

Laboratory Fortified Blanks / Laboratory Control Samples

A laboratory fortified blank (LFB) was analyzed with each QAQC batch. The LFB's rest the accept with the following exceptions:

None

None

Matrix Spikes and Spike Duplicates

A matrix spike (MS) and matrix spike duplicate (MSD) was analyzed with each QA/QC batch, The replicates met the acceptance criteria with the following exceptions:

Sample Dilutions

Red Poed 2/11/22
 MW-843 2/10/22

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Mark T. DeLong (Quality Assurance Co

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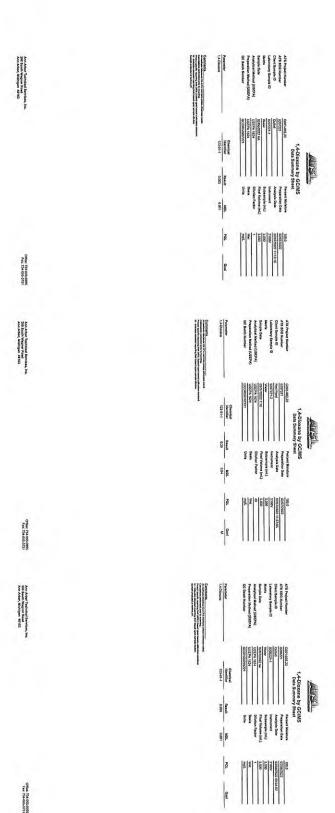
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QUALITY ASSURANCE / QUALITY CONTROL SUMMARY LABORATORY PRECISION SUMMARY

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QUALITY ASSURANCE / QUALITY CONTROL SUMMARY LABORATORY BLANK SUMMARY

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ANN ARBOR TECHNICAL SERVICES, INC.

QUALITY ASSURANCE / QUALITY CONTROL SUMMARY LABORATORY ACCURACY SUMMARY

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ANN ARBOR TECHNICAL SERVICES, INC.

QUALITY ASSURANCE / QUALITY CONTROL SUMMARY LABORATORY ACCURACY SUMMARY

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QUALITY ASSURANCE / QUALITY CONTROL SUMMARY

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Ann Arbor Technical Services, Inc. 290 South Wegner Road Ann Arbor, Michigan 43103

Diffice: 734-995-0995 Fat: 734-995-3731 Ann Arbor Technical Bervices, Inc 293 South Wagner Road Ann Arbor, Michigan 48103 Fax: 734-915-3731

Ann Arbor Technical Services, i 200 South Wegner Roed Ann Arbor, Michigan 48163 Office: 734-005-0005 Fax: 734-005-3731



Data Transmittal Cover Page

Project Name: Pall Corporation ATS Project Number: G001-002

ATS Report Number(s): Inorg_SRF_0214221 Client PO Number: 4505089688

This data report contains the results of 8 water samples, received by ATS on February 14, 2022 to be analyzed for 1,4-Dioxane.

We carlly that the sample analyses for this report have been conducted in accordance with guidelines provided in the inferenced standard team analyse, and are consistent with detailed procedures described in a written produced procedure and accordance of a written produced procedure produced procedure produced procedure produced procedure procedure procedures procedure procedures pr

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A faboratory reagest blank (LRB) was analyzed with each QA/QC batch. The LRB's met the acceptance criteria with the following exceptions:

A laboratory fortified black (LFB) was analyzed with each QA/QC batch. The LFB's met the acceptance criterio with the following exceptions:

None

None

A matrix spike (MS) and matrix spike duplicate (MSD) was weakyend with each QA/QC batch. The MS/A/SD's met the acceptance criteria with the following exceptions:

Near

Near

A matrix spike (MS) and matrix spike displicate (MSD) was analyzed with each QA/QC batch. The replicates met the acceptance criteria with the following exceptions:

None

None

/ February 21, 2022

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Laboratory Reagent Blanks

Matrix Spikes and Spike Duplicates

Matrix Replicates

Sample Dilutions

- Red Prod 2/14/22

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2. France Philip B. Simon (Laboratory Director)

Mark T. DeLong (Quality Assurance Coordinator)

Laboratory Fortified Blanks / Laboratory Control Samples

Samples containing compounds at concentrations above the initial cabbe those compounds. The following samples were diluted for 1,4-Diorane:



ORGANIC ANALYSIS 1,4-Dioxane by GC/MS USEPA 1624

ATS Project Number: G001-002.22 ATS SDG: 0214221

> Prepared By: Ann Arbor Technical Services, Inc. 290 South Wagner Road Ann Arbor, MI 48103

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LABORATORY OPERATIONS CASE NARRATIVE

ATS Project Number: G001-002 Report Date: 2/21/22 SRF / SDG Number(s): 0214221 Client PO Number: 4505089688

Case Narrative Summary

Sient Sample Identification	Sample Date	Requested Tors Aspend Time	Analysis	Maletz
Irrimi 2/13/22				
Outsil out	2/13/22	Deprit	1,4-Disease	Water
Red Prend	2/14/22	therni	1,4-Diarace	Water
Combination Pitternt	7/14/22	Urgest	1,4-Discrete	Water
RIFOC-IA	3/14/22	Urgent	1,4-Dinasar	Water
BISOC-2A	2/14/22	Ungenz	1,4-Dintene	Water
884	2/14/22	Urpest	1,4-Dintane	Water
Outfull Closb	2/14/22	Urgent	1,4-Dincine	Water
Outfull Test	2/14/22	Urgeni	1,4-Diusane	Water

Annirett - 1,4-Dimante (USBPA 1624) - Urgent TAT - Il Samples - 1 Mainte, Spine + 1 Mainte, Spine + 1 Mainte, Spine - 1

Sample Receipt, Chain of Custody Records, and Holding Times

Samples were delivered directly to ATS by Pall Corporation stalf. Samples were nectived with peoper chain of custody recents neclosed. Sample condition and anomalies, if any, are other presented in the "Sample Receigt" accision of this report of the documents on inclividual data others. All samples were prepared and analyzed within 45 days with the following exceptions:

Name

OHIT-012.21/CN_0215221-dec

Committation Chemistry & Environmental Science 230 South Wagner Road, Ann Arbor, Michigan 48103 Tel 734/095-0005 Fax 734/095-3731

Data Review and Approval

All data controlled in this report have been generated in accordance with guidelines provided in the self-standard extra method, and are consistent with detailed procedures described in a written standard opera-mentative (2014) appeals to the ATS Laboratory, as required by USEDA. All dates are per and mans reviewed in course compliance with Eurobove retirement 60°F and project specifications. In addition confirms to the thorough Quality Course of Quality Course Mansals.

A single QA/QC batch is defined as no more than 20 samples excluding method blanks (MB, LRB), fortified blank (BS, LFB, LCS), matrix spikes (MS, SPK), and deplicates whether spiked or native (MSI, SPK DUP, DUP, LR).

Data Deliverables

This data peckage constitutes a Level II package; other data report packages (Level I, Level IV DVP, EPA RS EDD) are available upon request. There were no bardenpy data summary shocks generated for this project.

Sample Analysis

J.4-Dimane. Analysis (OCMS): Samples were analysed by purge and two OCMS in accordance with USEPA method 1641 (Volatile Organic Compounds by indruge Disastes Gas Chromatography—Mass Spectomentry). An attailst calibration with at least five Evertweet was used to quantitize 1,4-Disastes. Samples were reported to project specific reporting limits. Samples were reported as mg/L.

Analytical OA/OC Summary

Calibration Verification

Instrument Blanks

Low system background was demonstrated through the sealysis of instrument blacks at a minimum of every 12 hour. All instrument blacks met the acceptance criteria with the following exceptions:

Name

Name

OA/OC Batch Summary Internal Standards

Internal structured areas and retention times met the acceptance criteria with the fullowing exceptions:

None

GMI-002.21/CN_0215221.6ec



ANN ARBOR TECHNICAL SERVICES,

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ORGANIC ANALYSIS 1,4-Dioxane by GC/MS USEPA 1624

ATS Project Number: G001-002.22 ATS SDG: 0215221

Prepared By: Ann Arbor Technical Services, Inc. 290 South Wagner Road Ann Arbor, MI 48103



LABORATORY OPERATIONS CASE NARRATIVE

ATS Project Number: G001-002 Report Date: 2/21/22 SRF /SDG Number(s): 0215221 Client PO Number: 4505089688

Appearance | Spiles | Westerrich | Description | Property | Ch. | U.S. | Construction | Ch. | Construction | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. | Ch. |

ANN ARBOR TECHNICAL SERVICES, INC.

Case Narrative Summary

This case narrative applies to the following 7 samples that were received at Ann Arbor Technical Services, Inc. (ATS) on 2/15/22, and associated matrix-specific QA/QC:

emples				
Client Sample Identification	Sample Date:	Requested Turn Amund Time	Analysis	Marrie
Received 2/15/22				_
Outfall 001	2/14/22	Urgent	1,4-Dissane	Water
Hed Pond	2/15/22	tirgent	1,4-Dissaue	Water
HIT-OC-1A	2/15/22	tlegent .	1,4-Dimann	Water
THE-OC-2A	2/15/22	Urgest	1,4-Distant	Water
MW-1121	2/14/22	Standard	1,4-Diganne	Water
MW-1125	2/14/22	Stendard	1,4-Distant	Water
NW-1035	2/14/22	Standard	1,4-Diamme	Water

Arabrila	Number of Namples
. 1.4-Dioxage (USEPA 1624) - Urgent TAT	 4 Samples + 1 Mairix Spike + 1 Mairix Spike Diplica
. 1,4-Dissane (USEPA 1624) - Standard TAT	3 Surples

Sample Receipt, Chain of Custody Records, and Holding Times

Samples were delivered directly to ATS by Fall Compension and Samples were entered with proper chain of the property of the Compension of the Compension of Samples were entered with proper chain of sections of this report on the commence on individual data sheets. All samples were prepared and multyred wit do day with the following exceptions:

Name

Consultants in Christians & Dissessmental Science 200 South Wagner Road, Ann Arber, Michigan 48103 Tel 734105-0005 Fax 7341005-3731

Data Review and Approval

ANN ARBOR TECHNICAL SERVICES, INC.

All diss contained in this report have been generated in scoordance with guidelines provided in the retained attent method, and are consistent with destiled procedure described in a written standard open procedures (10%) appendix to the AVS Internative, as requested by USIFA. All disks and appear and must reviewed to severe compliance with the above referenced SDF's and project seperations. In additional content of the severe compliance of the severe (Positify Control Mennits).

A single QA/QC batch is defined as no more than 20 samples excluding method blanks (MB, LRB), fortified blank (MS, LFB, LCS), matrix spikes (MS, SPK), and deplicates whether spiked or native (MSD, SPK DUP, DUP, LR).

Data Deliverables

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200

This data package constitutes a Level II package; other data report packages (Level I, Level IV DVP, EPARS EDD) are available upon request. There were no landcopy data summany altects generated for this project.

Sample Analysis

1.4-Dioxant Andreis (GCMS): Samples were unalyzed by purge and trap GCMS in accordance with USEPA resplical Lold (Volatile Crymte Campounds by indepe Dibution Gas Chromatography — Mass Spectrometry). An utilial calibration with at least five fevere way used to quantizate 4,4-Dioxanc. Samples were reported to project exporting limits. Samples were reported as my/L.

Anomalies Nated:

None

Analytical OA/OC Summary

Calibration Verification

Method calibration was verified through the analysis of a mid-level initial calibration verification (CV) standard at a frequency of every 12 linear. All verification etandards met the secreptance criteria with the following exceptions:

None

None

Instrument Blanks

OA/OC Batch Summary

Internal Standards





Data Transmittal Cover Page

Project Name: Pall Corporation ATS Project Number: G001-002 ATS Report Number(s): Inorg_SRF_ Client PO Number: 4505089688

Inorg_SRF_0215221 4505089688

Recipient: Mr. Gage Trendel gage_trendsht@pall.com No. of Pages (including cover pg.): Sarah Stubblefield Email: <u>Sarah Stubblefield ArmAthor Technical Services, com</u>

Email: <u>Sarah Stubblefield (ArmAthor Technical Services, com</u>

FAX Number: 734-095-3731

Copy report lo: Patterson, Kelth (kelth_patterson@patl.com), Brode, Jim (im_brode@patl.com)

3480

Date: 2/21/22

IF YOU DO NOT RECEIVE ALL PAGES OF THIS TRANSMITTAL, PLEASE CALL 734-895-0895

Laboratory Respent Blanks

A laboratory reagent blank (LRB) was analyze with the following exceptions:

Name and with each OA/OC betch. The LRIB's met the acce

Laboratory Fortified Blanks / Laboratory Control Samples

A laboratory furtified blank (LPD) was enalyzed with each QAQC batch. The LPT's met the acceptance criteria with the following exception:

Near

Near

Matrix Spikes and Spike Duplicates

A metrix spike (MS) and metrix spike duplicate (MSD) was analyzed with each QA/QC batch. The MSAMSD's met the acceptance criteria with the following exceptions:

Nose

Nose

Matrix Replicates

A matrix spike (MS) and matrix apike doplicate (MSD) was analyzed with each QA/QC batch. The replicates the acceptance enterts with the following exceptions:

None

None

Sample Dilutions

• Red Pend 2/15/22

Mortalitong

/ February 21, 2022

Mark T. DeLong (Quality Assurance Coordinator)

Philip B. Simon (Laboratory Director)





QUALITY ASSURANCE / QUALITY CONTROL SUMMARY LABORATORY ACCURACY SUMMARY

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Rapon Date:	2/21	2072											
Matrix Spike	Duplicate	(MSD)											
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ANN ARBOR TECHNICAL SERVICES, INC.

QUALITY ASSURANCE / QUALITY CONTROL SUMMARY LABORATORY PRECISION SUMMARY

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AVOC BACK NUMBER	CC0R00211221				
00	0215221				
Voied Number:	6001-602.22				
teport Date	2/21/2022				
Las temps () An	2/21/2022 S) / Matrix Spike Duplicate (MSD)	CAS Fax	1/2	Carona Lina	Correct
Las temps () An	2/1/2022 S) / Matrix Spike Duplicate (MSD)	CAS Fax.		Carona Lina	Corres

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ATS Project Number: G001-002.22 ATS SDG: 0216221 ORGANIC ANALYSIS
1,4-Dioxane by GC/MS
USEPA 1624



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*- Requested Turn-Around Time Priority Humber Key: 1 = Urgent 2 = Rush 3 = Standard



ANN ARBOR TECHNICAL SERVICES, INC.

QUALITY ASSURANCE / QUALITY CONTROL SUMMARY LABORATORY BLANK SUMMARY

Project Number:	G001-002.22			
Report Date:	1/21/2022			
Laboratory Read	ent Blank (LRB) / Method Blank (MB)			

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ANN ARBOR TECHNICAL SERVICES, INC.

QUALITY ASSURANCE / QUALITY CONTROL SUMMARY

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Report Date:	271/2022										
raject Number:	G001-002.22										
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ANN ARBOR TECHNICAL SERVICES, INC.

LABORATORY ACCURACY SUMMARY

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S Project Number: G001-002 port Date: 2/21/22 F / SDG Number(s): 0216221 ent PO Number: 4505089688

ANN ARBOR TECHNICAL SERVICES, INC.

QUALITY ASSURANCE / QUALITY CONTROL SUMMARY
LABORATORY BLANK SUMMARY

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ANN ARBOR TECHNICAL SERVICES, INC.

QUALITY ASSURANCE / QUALITY CONTROL SUMMARY LABORATORY ACCURACY SUMMARY

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ANN ARBOR TECHNICAL SERVICES, INC.

QUALITY ASSURANCE / QUALITY CONTROL SUMMARY LABORATORY ACCURACY SUMMARY

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Data Review and Appro

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CHAIN OF CUSTODY RECORD

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LABORATORY OPERATIONS CASE NARRATIVE

ATS Project Number: G001-002 Report Date: 2/21/22 SRF / SDG Number(s): 0217221 Client PO Number: 4505089688

Case Narrative Summary

Client Sample Identification	Nample Date	Requested Turn Around Time	Analysis	Mater
Received 2/17/22	7 2		-	
Owfall 881	2/16/22	Organi	1,4-Digame	Water
Red Presid	2/17/22	Urgent	1,4-Dissand	. Water
Combination Pffluent	2/17/02	Urgent	1,4-Distance	Water
DIFOCAL	2/17/22	Urgent	1,4-Dinasne	Water
18F-0C-7A	2/17/22	Urgens	1,4-Diesane	Water
DP-1	2/17/22	Degras	1,4-Distance	Water
Outsit Onb	2/17/22	Urgent	1,4-Dissame	Water
Outfall Test	2/17/22	Deposit	1,4-Dissant	Water

Upon receipt samples were acheduled for the following analyses

ARKINES Number of Sienteles

1.4-Dozane (USEPA 1624) – Urgent TAT * Baupter + 1 Maria Spike + 1 Metra Spike Duplasse

Sample Receipt, Chain of Custody Records, and Holding Times

Samples were delivered directly to ATS by Tall Corporation usef. Samples were received with proper chain of manely records excluded. Sample contition and assembles, if any, one other presented in the "sample theory" exciton of this record or the convention on individual data should. All samples were prepared and studyed within 45 days with the following exceptions:

Name

Consultants in Chemistry & Environmental Science 250 South Wagner Road, Ann Artor, Michigan 48103 Tel 734/995-0905 Fax 734/995-3721

Data Review and Approval

200

2 ST.0

20 00 00

INC.

ANN ARBOR TECHNICAL SERVICES,

All data contained in this report here been generated in accordance with guidelines provided in the reference standard less method, and are constants with detailed procedures described in a written standard operating procedures (SON) populátio sale Art Salestrowy, a required by USIPA. All data on peer and management reviewed to meant compliance with the above retrievents SOP's and operating seculifications. In adultion, all conditions the Euboratory's Quelley Assentator's Populary General Manada.

A single QAQC batch is defined as no more than 20 samples excluding method blanks (MB, LRB), fartified blank (HS, LFB, LCS), matrix spikes (MS, SPK), and duplicates whether spikes or native (MSD, SPK DUP, DUP, LR).

Data Deliverables

This data package constitutes a Level II package; other data report packages (Level I, Level IV DVP, EPA R5 EDD) are available upon request. There were no bardcopy data summary abeets generated for this project.

Sample Analysis

1.4-Distance Analysis (ICAMS): Samples were analysed by purge and trap (ICAMS in accordance with USIIPA, method 1624 (Volatile Organic Compounds by Instinge Dilution Care Conventingraphy – Mans Spectronistry). An allabelian with at least five levels were used to quantitate 1,4-Distance. Samples were reported to project appeals reported in give.

Anomalies Notest:

None

Analytical OA/OC Summary

Calibration Verification

Method calibration was verified through the analysis of a mid-level initial calibration verification (CV) standard at a frequency of every 12 hours. All verification standards mut the acceptance criteria with the following exceptions:

None

None

Instrument Blanks

Low system background was demonstrated through the enalysis of instrument blanks as a minimum of every 12 hours. All instrument blanks met the acceptance criteria with the following exceptions:

OA/OC Batch Summary

Internal Standards





Data Transmittal Cover Page

Project Name: Pall Corporation ATS Project Number: ATS Report Number(s): Client PO Number: G001-002 Inorg_SRF_0217221 4505089688

Project Description: This data report contains the results of 6 water samples, received by ATS on February 17, 2022 to be analyzed for 1,4-Dioxans.

Recipient: Mr. Gage Trendel gage_trendel@pall.com No. of Pages (Including cover pg.): 16 Seruh Stubblefield Email: Serah Stubble Serior Chemini / Lab Memoger FAX Number: 734-995-3731

udditional Message: Copy report to: Patienen, Keith (beth; patienen/clast.com); Drode, Jim (jim Inde(lipal.com); Keit Cobbusier (existribusier) (service) (s

3480

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KIGORI 602 22/Date_Transmittel Cover Page 515 km

2/21/22



ORGANIC ANALYSIS 1,4-Dioxane by GC/MS **USEPA 1624**

ATS Project Number: G001-002.22 ATS SDG: 0217221

Prepared By: Ann Arbor Technical Services, Inc. 290 South Wagner Road Ann Arbor, MI 48103

Laboratory Reagent Blanks

A laboratory reagent blank (LRD) was analyzed with each QA/QC batch. The LRB's next the acceptions:

None

None

Laboratory Fortified Blanks / Laboratory Control Samples

A laboratory firetified blank (LFB) was analyzed with each QAQC batch. The LFB's met the a with the fistioning exceptions:

Nane

Matrix Spikes and Spike Duplicates

A matrix spike (MS) and matrix typks duplicate (MSD) was analyzed with each QA/QC batch. The MSA/SD's met the acceptance criteria with the following exceptance.

None

None

Matrix Replicates

A matrix spike (MS) and matrix spike duplicate (MSD) was analyzed with each QA/QC batch. The replicates met the acceptance criteria with the following exceptions:

Sample Dilutions

Samplex containing compounds at concentrations above the initial cultivation curtiose compounds. The following samples were diffued for 1,4-Dioxane:

- Red Pond 2/17/22

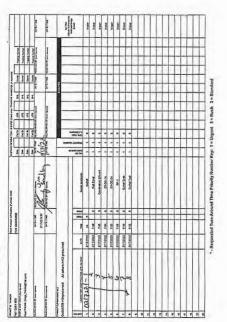
Morkalitong

Mark T. DeLong (Quality Assurance Coordinator)

Species S Philip B. Simon (Laboratory Director)

GIG1-012.11.CN (121722) dai:





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ANN ARBOR TECHNICAL SERVICES, INC.

ANN ARBOR TECHNICAL SERVICES, INC.

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Data Transmittal Cover Page

Project Name: Pall Corporation ATS Project Number: G001-002

Inorg_SRF_0218221 4505089688

IF YOU DO NOT RECEIVE ALL PAGES OF THIS TRANSMITTAL PLEASE CALL 734-895-0995



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ANN ARBOR TECHNICAL SERVICES, INC.

All Sills

ORGANIC ANALYSIS 1,4-Dioxane by GC/MS USEPA 1624

ATS Project Number: G001-002.22 ATS SDG: 0218221

Prepared By: Ann Arbor Technical Services, Inc. 290 South Wagner Road Ann Arbor, MI 48103



LABORATORY OPERATIONS CASE NARRATIVE

ATS Project Number: G001-002 Report Date: 2/21/22 SRF / SDG Number(s): 0218221 Client PO Number: 4505089688

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ANN ARBOR TECHNICAL SERVICES, INC.

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Upon receipt samples were scheduled for the fullowing analyses.



QUALITY ASSURANCE / QUALITY CONTROL SUMMARY

Vetod.	Ut	EFA 1024							
OAYOC Batch No.	eter oc	ORGER 13221							
603	62	3221							
Project Number:	60	11-002.22							
Report Date:	22	1.2022							
Laboratory F	Reagent E	lank (LRB)	Method Blank (MB)						
Lab Sample D	Aranysis De	Analysia Time	Chenkal Name	CAS	Fands	Unit Con	Martinal Delegation Land	Payering Details on Link	Commerce
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ANN ARBOR TECHNICAL SERVICES, INC.

QUALITY ASSURANCE / QUALITY CONTROL SUMMARY

Method	USEFA1624					_					
GAGC EMA Number:	QC0RG0218221										
503	6215221										
Project Number:	G001-002.22										
Project Number: Report Deta:	2/21/2022										
Report Deta:	2/21/2022	Laboratory Control Sam	ple (LCS)								
Report Deta:	2/21/2022 d Blank (LFB) /	Laboratory Centrol Sam	ple (LCS)	Service Connection	Spine Added	Diament Conservation	un	Ferret	10	un	Correct

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ANN ARBOR TECHNICAL SERVICES, INC.

QUALITY ASSURANCE / QUALITY CONTROL SUMMARY

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606	6216221										
Project Number:	G001-002-22										
Report Date:	2/21/2022										
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ANN ARBOR TECHNICAL SERVICES, INC.

QUALITY ASSURANCE / QUALITY CONTROL SUMMARY LABORATORY ACCURACY SUMMARY

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AVOC BASES NUMBER	QCOROC21822	1										
503	0215221											
Project Number:	G201-002.22											
Report Date:	2/21/2022											
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ested Turn-Around Time Priority Number Key: 1 = Urgent 2 = Rush 3 = Standard

ANN ARBOR TECHNICAL SERVICES, INC. COULTY ASSURANCE COULTY COSTROL, EDULARY LABORATORY PREZESON SURLARY SAST CAST TO THE COST OF THE C	1,4-Dioxane by GC/MS Data Summary Sheet ATB Project Number G19221 thorse- G19221 thorse- G19221 thorse- G19221 thorse- G19221 thorse- G19221 thorse- G19221 thorse- G19221 thorse- G19222 thorse- G1922	### 1.4-10 trans by CC/MS Data Summary Shoet #### 1.4-10 trans by CC/MS Data Summary Shoet ##### 1990	1,400amb by GC/MS Dots Summery Sheet
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1,4-Dioxane by GC/MS Data Summary Sheet



Data Transmittal Cover Page

ATS Project Number: G001-002
ATS Report Number(s): Inorg_SRF_0221221
Client PO Number: 4505089688

Project Description: This data report contains the results of 20 water sumples, received by ATS on February 21, 2022 to be analyzed for 1,4-Distance.

all the sample analyses for this report heve been conducted in accordance with publishes provided need standard test insulhod, and are consistent with desirated procedures described in a vertice serving Procedure product to the ATC behaviorable, as required by USEPA. Laboratory date sheeps, AACC Mismaton are available for heap-esses and earts of the laboratory proquest. Unless

Recipient	Mr. Gage Trendel	-	Email: FAX Number:	gage_trendel@pall.com
No. of Pag	pee (including cover pg.):	34		
Franc Sorah Stubblefield Sense Chents / Lab Manager		Email: FAX Number:	Sarph Stubblefe 734-995-3731	MIT Ans Action Technical Services com
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2/20/22



ORGANIC ANALYSIS 1,4-Dioxane by GC/MS **USEPA 1624**

ATS Project Number: G001-002.22 ATS SDG: 0221221

Prepared By: Arbor Technical Services 290 South Wagner Road Ann Arbor, MI 48103

Samples consisting compounds at concentrations above the initial calibration curve were diluted and manalyzed for those compounds. The following samples were diluted for 1,4-Dioxone:

QA/QC Batch Summary

Internal Standards

Internal standards areas and retention times met the acceptance criteria with the following except

None:

Laboratory Reagent Blanks

A laboratory reagent blank (LRB) was analyzed with each QA/QC batch. The LRB's met the acceptance enterior

Laboratory Fortified Blanks / Laboratory Control Samples

A laboratory foreignd black (LPB) was unalyzed with each QAQC batch. The LPB's rest the acceptance criteria with the following exceptions:

None

None

Matrix Spikes and Spike Duplicates

A matrix spike (MS) and matrix spike duplicate (MSD) was analyzed with each QAQC batch. The MS/ASD's met the anceptance criteria with the failthwing exceptance:

Name

Name

A matrix spike (MS) and matrix spike duplicate (MSD) was analyzed with each QA/QC batch. The replicates not the acceptance criteria with the following exceptance: Nutre

Matrix Replicates

G081-003-204CN 9221221-004

doni-oni 20/00/ 0221221 des

Sample Dilutions

· LB-4 2/18/22

• TW-23 2/18/22

• TW-19 2/18/22 • TW-14 2/18/22 • TW-17 2/18/22 • TW-18 2/18/22

• TW-28 2/15/22

• TW-20 2/18/23 TW-20 2/18/22
 PW-1 2/18/22
 DOLPHT 2/18/22
 TW-21 2/18/22

• TW-18 2/19/22

Markalakong

Specif S. Philip B. Simon (Laboratory Director)

Mark T. DeLong (Quality Assurance Coordinator)





LABORATORY OPERATIONS CASE NARRATIVE

ATS Project Number: G001-002 Report Date: 2/28/22 SRF/SDG Number(s): 0221221 Client PO Number: 4505089688

Case Narrative Summary

This case narrative applies to the following 20 samples that were reserved at Ann Arbar Technical Services, Inc. (ATS) so 2/21/22, and associated matrix-specific QA/QC:

Client Sample Mentification	Sample Der	Requested Turn Assend Time	Analysis	Magix
Received 20102	-			
Out III 001	2/20/22	Ligent	1,4-Dinvane	Water
Red Fond	2/21/22	Deposi	1,4-Diname	Water
Combination Uffloret	2/21/22	Urgent	1,4-Dineane	Water
Eff-OC-la	2/21/22	1 frgml	1,4-Dioxent	Water
Tiff-OC-24	2/1//22	Hegeni	1,4-Diesene	Water
2054	20102	Ulgent	1,4-Diespan	Water
Outfall Grah	2/21/22	Ulgrat	1,4-Diorace	Water
Outfull Test	2/21/72	Ligent	1,4-Dioxane	Wefer
1.0-4	2/18/22	Hemirol	1,4-Dincme	Wener
TW-73	2/19/22	Standard	1.4-Dinyane	Water
TW-29	2/11/22	Standard	1,4-Dimone	Water
TW-14	2/14/22	Standard	1,4-Digrame	Water
TW-17	2/16/23	Stendard	1,4-Distant	Water
TW-10	2/IN/22	Standard	1,4 Diosans	Water
TW-28	2/18/22	Sanbel	1,4-Diotane	Water
TW-30	2/16/22	Standard	1,4-Dioyene	Water
PW-I	20102	Strederd	1,4-Dioxane	Water
DOUBIL	7/18/22	filenderd	1,4-Dispasse	Water

Consultants in Chemistry & Environmental Science 290 South Wagner Road, Ann Amor, Michigan 48103 Tel 734/905-0905 Fac 734/905-3731



Upon receipt samples were scheduled for the following analyses

Anthriu Murber of Sanutes

1.4-Dissace (USEPA 1624) - Urgani TAT - E Sanutes 1/4-Dissace (USEPA 1624) - Timologi TAT - E Sanutes 1/4-Dissace (USEPA 1624) - Timologi TAT - 1/2 Samples

Sample Receipt, Chain of Custody Records, and Holding Times

Samples were delivered directly in ATS by Pall Corporation staff. Samples were received with proper thain of control yearonts included. Sample contilion and anomalies, if any, we other promoted in the "Sample Receipt" section of this report or in the commentation in helividual data absent. All samples were proposed and analyzed within 55 days with the following corporation.

Data Review and Approval

All data contained in this report have been generated in accordance with guidelines provided in the referenced standard last method, and are consistent with detailed percedures described in a written standard eperating procedures (SOFs) appendix to the AST abbonsiery, as required by USEPA. All date are percer and management reviewed to stance compliance with the above tetremout SOF's and perject specifications. In addition, all data confirms to be bloomsived Y-Quilly Assembler (Publicy Content Manage.

A single QA/QC batch is defined as no more than 20 samples excluding method blanks (MB, LRII), fortified blank (BS, LFB, LCS), matrix spikes (MS, SFK, MS, and duplicates whether spiked or native (MSD, SFK DUP, DUP, LR).

Data Deliverables

This data package constitutes a Level II package; other data report packages (Level I, Level IV DVP, EPA RS EDD) are available upon request. There were no hardcopy data summary sheets generated for this project.

L4-Diemne Annipale (ICCMS): Samples were analyzed by purge and into CCMS in accordance with USEPA method 1624 (Volatile Organic Composeds by Isotope Ditulent Gas Chromatography - Mass Specimenty). An initial calibration with a first first level was used to quantitate 1,4-Diorann. Samples were reported to project specific reporting limits. Samples were reported as mgf...

Analytical OA/OC Summary

Calibration Verification

C001-022-2U/CV E221221-444



Jim Bradley

Trendel, Guge «gage_trendel@pail.com» Mondey, Pebruary 21, 2022 10:22 AM Jim Bradley; Sarah Stubblefield; Mark DeLong David Stubblefield RE: Pell eCOC 2/21/2022

Yes. We will go off of the vial for all.

Gage Trendel

YAV OPERATIONS AND RESIDURCE MANAGEMENT INC. 642 S. Wagner Road | Ann Arbor | MI | 48103 O: 616.977.1000 | D: 419.767.5144 | F: 616.977.1005

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Good morning Gage,

Comb. Eff. Sample time on COC-235 on sample vial 7:25 Bo-1 sample time on COC-735 on sample vial 7:30 Sample 9:34 has a sample name of TW-1 on the COC. We have a sample vial TW-10 with the same date and time, but don't have a sample TW-1.

In the past we have went with the information on the vials, do you want me to do that in this case as woll?

Also do you have previous data on sample TW-29?

From: Trendel, Gage state: trendri@tail.com> Sent: Mondoy, February 21, 2022 2:53 AM To: Sarah Stubblefield <arab. Stubblefield@name /Mork.Del.pom@namebrotehincinerrics.com> Ce: David Stubblefield 25 Tubblefield@name

Paper

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e.	м	a/4- 1	tell of	202/	21/202	5		

Gage Trendel Chemist

PAY OPERATIONS AND RESOURCE MANAGEMENT, INC. 642 S. Wagner Road | Ann Arbor | Mi | 48103 O: 610.977.1000 | D: 419.787.5144 | F: 610.977.1005

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Data Transmittal Cover Page

Pall Corporation Inorg_SRF_0222221 4505089688

Recipient: Mr. Gage Trendel

riditional Message: Copy report to: Patenzos, Kalin (kelin patterson@pat.com), Brode, Jim (jim brode@pat.com) Katle Stroheuer (extroheuer@hveng.com), recoda@hv-operations.com, Paten, Sue Peters (sue paters@pat.com) Amende teabela [amanda_tabolis@gat.com)

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ORGANIC ANALYSIS 1,4-Dioxane by GC/MS USEPA 1624

ATS Project Number: G001-002.22 ATS SDG: 0222221

Prepared By: Ann Arbor Technical Services, Inc. 290 South Wagner Road Ann Arbor, MI 48103



ANN ARBOR TECHNICAL SERVICES, INC.



LABORATORY OPERATIONS CASE NARRATIVE

ATS Project Number: G001-002 Report Date: 2/28/22 SRF / SDG Number(s): 0222221 Client PO Number: 4505089688

Case Narrative Summary

This case narrative applies to the following 13 samples that were received at Ann Arbor Technical Scr. (ATS) on 2/22/22, and associated matrix-specific QAQC:

Tierr Sample identification	Sample Date	Requested Turn Around Time	Attelysis	Meirre
Decreed 2/22/22		The state of the s	-	
Outfall (9)	2/21/22	Ugent	1,4-Diocene	Water
Red Prod	2/22/22	Urgent	1,4-Diexene	Water
Combination Effluent	20202	Urgent	1,4-Diextne	Water
FIFOC-1e	1/21/22	Urgent	1,4-Discusse	Water
HIF-OC-2a	2/22/22	Urgent	1,4-Dimme	Water
DP-1	2/22/22	Ulegesit	1,4-Diasme	Water
Outfall Gold	3/23/22	Hegent	1,4-Distate	Water
Outfall Test	2/22/22	Urgest	1,4-Diatase	Weier
MW-121+	2/11/22	Stroket	1,4-Dinesne	Water
MW-121d	2/21/22	Standard	1,4-Direase	Water
MW-544	2/21/22	Standard	1,4-Dissame	West
NEW-SAS	7/21/22	Hereford	1,4-Distant	Water
MW-77	20102	Standard	1.4.Dissage	Water

Δ	nelan	is.		
-	4.	·	or reservant	100

1,4-Disease (USEPA 1624) - Urgent TAT 1,4-Disease (USEPA 1624) - Standard TAT

Consultants in Chemistry & Environmental Science 290 Seath Wagner Road, Arts Arbor, Michigan 48103 Tel 734995-005 Fee 734995-3731

Sample Receipt, Chain of Custody Records, and Holding Times

Samples were delivered directly to A.T.S. by All Corporation ALL: Samples were stated with proper classic all seasons by records and the Samples of the Samp

Data Review and Approval

All data contained in this report have been generated in accordance with guidalines provided in the reference standard teat method, and are consistent with detailed procedures described in a written standard operating procedures (SOP) operation to the ATS Lobertupe, a required by USENA. All data was pear and management reviewed to network compliance with the above referenced SOP's and project regulfications. In addition, all confirms to the loberture's Vosibley Assurance (Vasality Control Manuta).

A single QA/QC batch is defined as no more than 20 samples excluding method blanks (MB, LRB), fortified blanks (BS, LPB, LCS), matrix spikes (MS, SPK), and duplicates whether spiked or native (MSD, SPK DUP, DUP, LR).

Sample Analysis

I.d-Diratme Antiraja (OCMS): Samples were analyzed by purge and trap OCMS in accordance with USEPA method 1624 (Volatile Organic Compounds by Isotope Dilution Gas Chromatography - Mass Spectrometry). An initial collisation with all base file victors was used to quantifate 1,4-Diraton. Samples were reported to project specific reporting limits. Samples were reported as mg/L.

Anomalies Nated:

Nane

Analytical OA/OC Summary

Calibration Verification

Method calibration was verified through the study as of a mid-level initial calibration verification (CV) standard at a frequency of every 12 hours. All verification standards met the acceptance enteria with the following exceptions:

None:
Name:

Instrument Blanks

OA/OC Batch Summary

Internal Standards

Laboratory Reagent Blanks

A laboratory reagest black (LRII) was analyzed with each QA/QC basch. The LRII's met the acceptance criteria with the following exceptions:

Num:

Laboratory Portified Blanks / Laboratory Control Samples

A laboratory furtilied blank (LFB) was analyzed with each QA/QC batch. The LFB's met the acceptance criteria with the following exceptions:

None

None

Matrix Spikes and Spike Doplicates

A matrix spike (MS) and matrix spike deplicate (MSI)) was analyzed with each QA/QC batch. The MS/MSD's mot the acceptance criteria with the following exceptions:

Name

Name

Matrix Replicates

A matrix spike (MS) and matrix spike displicate (MSD) was analyzed with each QA/QC batch. The replicates met the acceptance criteria with the following exceptions:

None

None

Sample Dilutions

Mockalitong

Philip B. Simon (Laboratory Director)

Mark T. DeLong (Quality Assurance Coordinator)

Samples containing compounds at concentrations above the initial calibration curve were diluted and reunalyzed for those compounds. The following samples were diluted for 1,4-Dioxand:

/ February 28, 2022

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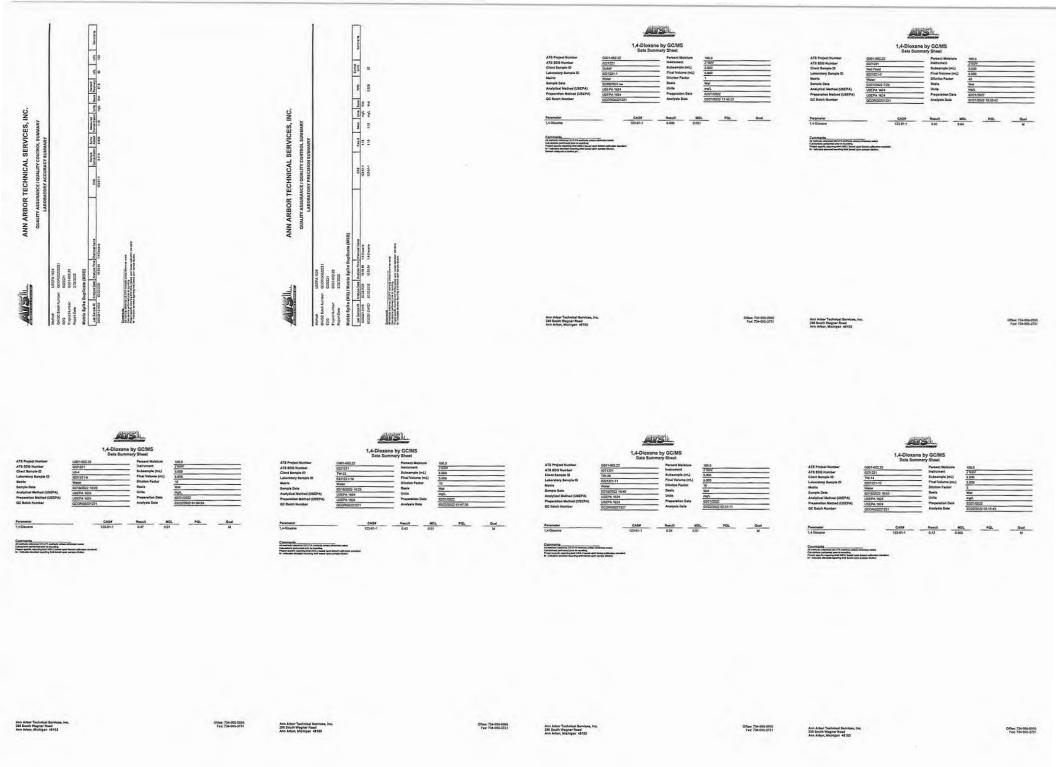
Institute Central Sample (LCS) (On-Goldo President and Accuracy (OPR)

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AUSIL 1,4-Dioxane by GC/MS Data Summary Sheet ATS Project Number
ATS SDG Number
Client Sample ID
Laboratory Sample ID
Mahris
Gemple Date
Analytical Method (US
Preparation Nethod (U CASA Result MOL PQL Qual 123-91-1 0.005 0.001 123-01-1 0.41 0.04 FGL Quel Parameter 1.4-Disrane Office: 734-015-0105 Fac: 734-015-3731 CASE Result MDL PQL Qual 123-01-1 ND 0.001 U CASS Result MOL POL Qual CASE Result MDL PQL Qual 123-91-1 0.01 0.02 M Commencia
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Data Transmittal Cover Page

Project Name: Pall Corporation
ATS Project Number: G001-002
ATS Report Number(s): Inorg_SRF_0223221
Glient PO Number: 4505089688

Project Description: The data report contains the results of 11 water samples, received by ATS on February 23, 2022 to be analyzed for 1,4-Dioxans.

is analyses for this report have been conducted in accordance with guiderines provided to the method, and are commisted with deliminary processing the conductive described in a witness conduce specific to the ATE Leboratories, as neglitive by USEPA. Luberatory data sheets, maken are sensitive for inspection and audit at the laboratory open repeats. Unless makes and audit at the laboratory open repeats. Unless the conductive that accordantly have been applied to the conductive that accordantly have been accordant.

Recipient	Mr. Gage Trendel		Email: FAX Number:	gups_Irendel@exit.com
No. of Pag	ges (Including cover pg.):	25		
From:	Sarsh Stubbiefeld Nerter Cheniel / Lab Manager	Email: FAX Number:	Sarah Stuttolefie 734-005-3731	SAIDAmArborTechnicalScrvces com
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ORGANIC ANALYSIS 1,4-Dioxane by GC/MS USEPA 1624

ATS Project Number: G001-002.22 ATS SDG: 0223221

> Prepared By: Ann Arbor Technical Services 290 South Wagner Road Ann Arbor, MI 48103

Samples containing compounds at concentrations above the initial calibration curve were diluted and manalyzmi for those compounds. The following samples were diluted for 1,4-Dioxane:

/ February 28, 2022

Instrument Blanks

and was demonstrated floough the analysis of instrument blanks at a minimum of every 12 thanks out the acceptance criteria with the following exceptions:

OA/OC Batch Summery

Internal standards areas and resention times must the acceptance enteria with the following exceptions:

- None

Laboratory Reagent Blanks

A laboratory reagent blank (LRII) was analyzed with each QA/QC batch. The LRIF's met the socreptance criteria with the following exceptions:

New York

Laboratory Fortified Blanks / Laboratory Control Samples

A laboratory fortified black (LFB) was analyzed with each QA/QC batch. The LFB's mit the acceptance criteria with the following exceptance:

Matrix Spikes and Spike Dunlicates

A metrix spike (MS) and matrix spike duplicate (MSD) was analyzed with each QA/QC batch. The MS/MSD's met-the acceptance criteria with the following exceptions:

Matrix Replicates

A matrix spike (MS) and matrix spike duplicate (MSD) was analyzed with each QA/QC balch. The replicates net the acceptance criteria with the following exceptions:

Nine:

Sample Dilutions

Moukalitong

Philip II. Simon (Laboratory Director)

Mark T. DeLong (Quality Assurance Coordinator)





LABORATORY OPERATIONS CASE NARRATIVE

ATS Project Number: G001-002 Report Date: 2/28/22 SRF / SDG Number(s): 0223221 Client PO Number: 4505089688

Case Narrative Summary

This case namelies upplies to the following 11 samples that were received at Ann Arbor Technical Newton, Inc. (ATS) on 2/23/22, and associated matrix-specific QA/QC:

Client Sample Ideatification	Sample Dear	Requested Turn Amond Time	Anniyes	Malris
Increed 2/21/22		H. A. S. C. C. C. C. C.		1
Onifelt 001	2/72/22	Ugeni	1,4-Dinesne	Water
Red Presi	2/21/02	Urgent	1,4-Dioxane	Water
Composition Efficient	20102	Unetest	1,4-Disease	Water
Hit-OC-1s	20303	Urgest	1,4-Dimana	Water
TIS-OC-24	2/2V22	Digest	1,4-Dimene	Water
884	20302	Urgeni	1,4-Dimesor	Water
Outtell Grain	2/21/22	Urgeni	1,4-Dioxane	Water
Outfull Test	20302	tirpent	1,4-Diesane	Water
N(W-1244	מתנחנ	Standard	1,4-Dioxana	Water
MW-124r	202072	Standard	1,4-Diosane	Water
MWAG	20202	Standard	1,4-Diorese	Water

Upon receipt samples were scheduled for the following sualyses.

Analysis - 1.4-Diovane (USIDA 1824) - Urgani TAT - 1.4-Diovane (USIDA 1824) - Urgani TAT - 1.4-Diovane (USIDA 1824) - Simulani TAT - 1.5 Simples - 1 Manus Spike + 1 Manus Spike - 1 Manus Spi

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Consultants in Chemistry & Environmental Science 200 South Wagner Road, Ann Arbot, Michigan 48103 Tel 734/05-0925 Fax 734/085-3731

All data contained in this report have been generated in accordance with guidelines provided in the reference standard test method, and are construct with detailed percedures described in a written numeric operating procedures (2004), spould in the AST absolutesty, as required by USSTA. All data may pear and management reviewed to ensure compliance with the above referenced SDP* and project specifications. In addition, all conforms to the behaviority Quilty Assurance (Youlty Control Manasia. A single QAVCC batch is defined at no more than 20 samples excluding method blanks (MB, LRB), fortified blank (BB, LFB, LCS), matrix spikes (MS, SPK), and deplicates whether spiked or native (MSD, SPK DUP, DUP, LR).

Samples were delivered density to ATS by Poll Corporation and T. Samples were received with paper chain of attempts years behalfed. Samples confidenced anomalies, of any, we often presented in the "Sample Internst." action of this regular action and the received and the samples for the samples of the samples with the following exceptions:

Note:

Sample Receipt, Chain of Custody Records, and Holding Times

Data Dellverables

Data Review and Approval

This data package constitutes a Level II package; other data report packages (Level J, Level IV DVP, EPA R5 EDD) are available upon request. There were no hardcopy data summary sheets generated for this project.

Sample Analysis

J.4-Distant Analysis (GCAAS): Samples were studyed by purgo and step GCAAS in accordance with USUPA method 10A (Volatile Organic Compounds by tostipe Dilation Clas Chromatography – Mars Sportrometry). As initial estillation with a last five few-ties was used in quadratic 1,4-Distance. Samples were reported to project specific reporting limits. Samples were reported as mg/L.

Analytical OA/OC Summary

Calibration Verification

G081-802.21/CN_0221221 AM



Jim Bradley

Trendel, Gage «gage_trendel@pail.com» Wednesday, February 23, 2022 12:07 PM Jim Bradloy, Sarah Stubblefield; Mark DeLong David Stubblefield RE: Pall eCOC 2/23/2022

They're 2/22/22.

Gage Trendel

18V APERATIONS AND RESCHING, SCHAGEMENT, INC. 642 S. Wagner Road | Ann Arbor | MI | 48103 O: 616.977,1000 | D: 416.787.5144 | F: 816.977,1005

From Jin Bradley (fin bradley) glavnothor exhibitations. L'issuer saint party.

SITT Widnessey, Pristrany 33, 2003-200.

To Trendy, Gape rape, Jirneld (Parl, como; Sarah Subbleffold Careh, Trubbleffold Ga Mark, Deling Branch and Careh (Sarah, Trubbleffold Careh). Trubbleffold Ga Mark, Deling Branch and Careh (Sarah, Trubbleffold Careh). Trubbleffold Ga Mark, Deling Branch and Careh (Sarah, Sarah).

CC David Subbleffold (Chuld Subbleffold Garnar bortechnicals review, como-Sableton (Chuld Careh).

Samples 9,10,11 have a date of 2/23/22 on the COC. And 2/22/22 on the vials.

Would you like to go with dates on the vials?

Fram: Trendel, Gage «gar», trender@tost.com» Sent: Wedendely, February 23, 2022 30:50 AM To serial flushfield «Stath, flushfield-glonarherischskaltenders, com») Mark Deleng «Mark, Et losse@sansherischstaltenders, com» Co David Stabelland «Stath, Stathfield-genarherischskaltenders, com»; Jim Brolley

(Irn.hradleydPannarbortechn)
Subject: Pall eCOC 2/23/2022

Gage Trendel Chemiat

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ORGANIC ANALYSIS 1,4-Dioxane by GC/MS USEPA 1624

ATS Project Number: G001-002,22 ATS SDG: 0224221

Prepared By: Arbor Technical Services, 290 South Wagner Road Ann Arbor, MI 48103

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QUALITY ASSURANCE / QUALITY CONTROL SUMMARY LABORATORY BLANK SUMMARY

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100	0224	21								
Voject Number	G001	402.22								
Report Date:	2250	1922								
A Miles										
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Lab temps D	Veryen Dans	Analysia Time	Chemical Name	cus	Faul	Lives	lara	Method Detection Liver	Papering Deservin Link	Corrects
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ANN ARBOR TECHNICAL SERVICES, INC.

QUALITY ASSURANCE / QUALITY CONTROL SUMMARY

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DAVIOC Batch Number:	000900224221										
500	0224221										
Project Number:	6001-002.22										
Report Date:	2/25/2022										
lepos Date:	2/21/2022	Laboratory Centrel Samp	ple (LCS) / On-Going I	Precision and	Accus	racy (OPR)					
Report Date.	2/21/2022		ple (LCS) / On-Going I	Servin	Lake	Manual Constitution		Fernird Rackey	ia	ıa	Camer



ANN ARBOR TECHNICAL SERVICES, INC.

QUALITY ASSURANCE / QUALITY CONTROL SUMMARY

		LABORATORY ACCU	RACY SUM	MARY							
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Matrix Spike (US)											
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if you amoney question of DCAL leaded and bound patterners consider
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ANN ARBOR TECHNICAL SERVICES, INC.

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800	C224221												
Project Number:	G001-002.22												
Report Date:	2252022												
Matrix Spike Dupli	icale (MSD)												
Las Barryle ID Armyn	a Casa Anayaa Time	Danies Name	CAS	Sample Concentration	Spks Atted	Present	Lines	100	Ferret.	ID.	LO.	Com	_
\$224721-2 MID \$224		1,40mm	 12541-1	2418	0.800	1.00	not	WW	84.5	12	123	-	

Comments

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livered directly to ATS by Phil Corporation staff. Samples were received with peoper claim of included. Sample condition and exceeding, if my, are either prescuted in the "Sample Receipt" perform the comments on multi-visual data bases. All samples were prepared and analyzed which following exceptions:

Consultants in Chemistry & Environmental Science r Road, Ann Arter, Nicingan 48103 Tel 734505-0995 Fair 734505-3731

Matrix

ATS Project Number: G001-002 Report Date: 2/28/22 SRF / SDG Number(s): 0224221 Client PO Number: 4505089688

LABORATORY OPERATIONS
CASE NARRATIVE

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MISI.	200 South Wagner Read And Ariser, Munigan 48102 Tel. 72496-0009 Fes. 72499-37 Michigan Laboratory (Cr. 9504
Zinchi sining	Wisconsin Laboratory ID; 994321
	Minhigan Laboratory IO: 9604 Wisconsin Laboratory IO: 9963

Data Transmittal Cover Page

Project Name: Pall Corporation ATS Project Number: G001-002

ATS Report Number(s): Inorg_SRF_0225221 Client PO Number: 4505089688

Project Description: This date report contains the results of 14 water samples, received by ATS on February 25, 2022 to be analyzed for 1,4-Dioxene.

Email: gase Irenduir/pall.com
FAX Number: Recipient: Mr. Gaga Trendel No. of Pages (Including cover pg.): 28 Sereh Stubblefield Email: Sereh Stubblefield(f) Arn Arter Technical Similes, com

FAX Number: 734-005-3731

Additional Manages: Copy report in: Policeson, Keith (hell), policeson@politzem), Boote, Jim (jim (ander@politzed.com) Keita Strokuner (actioner@hern-gozen), recodic@he-presions.com, Polices, Sue Peiers (sue, police@hell

34960 Date: 2/28/22

IF YOU DO NOT RECEIVE ALL PAGES OF THIS TRANSMITTAL, PLEASE CALL 734-905-6915.

KNOWN 602 2 NO 42 Transmittel Cover, Prov N.S. at:



ORGANIC ANALYSIS 1,4-Dioxane by GC/MS USEPA 1624

ATS Project Number: G001-002.22 ATS SDG: 0225221

Prepared By: Ann Arbor Technical Services, 290 South Wagner Road Ann Arbor, MI 48103



LABORATORY OPERATIONS CASE NARRATIVE

ATS Project Number: G001-002 Report Date: 2/28/22 SRF/SDG Number(s): 0225221 Client PO Number: 4505089688

Case Narrative Summary

This case narmities applies to the following 14 samples that were received at Ann Athor Technical Services, Inc. (ATS) on 205/22, and associated matrix-specific QAQC:

Client Sample Identification	Tample Date	Requested Turn Armind Time	Analysis	Manne
Received 2/75/22	1	17 U.S. V.		
Ourfull 001	2/24/22	Urpent	1,4-Director	Water
Red Ford	7/21/22	Urgent	1,4-Damen	Water
Combination Pffluent	2/21/22	Orgent	(A-Dissane	Water
Hif-OC-1e	2/25/22	Hegest	1,4-Dimme	Weier
FIT-OC-24	2/25/22	Urgesi	1,4-Diesane	Water
DP-1	2/25/22	Urpens	1,4-Distant	Water
Ourfall Onh	2/25/22	t)rgree	1,4-Dietane	Welc
Outfall Test	2/21/22	Urgent	1,4-Dissann	Water
TW-34	2/24/22	Standard	1,4-Dintane	Water
TW-22	2/24/22	Spandent	1,4-Distant	Water
MNV-57	2/24/22	Standard	1,4-Dimme	Water
MW-Ind	3/24/22	Standard	1,4-Dintam	Water
MW-IM	2/24/22	Standard	1,4-Dieszne	Water
MW-1 Replacement	2/24/22	Standard	1,4-Distante	Water

Upon receipt samples were scheduled for the following analyses

Consultants in Chemistry & Environmental Science 200 South Wagner Road, Ann Arbor, Michigan 48153 Tel 734095-0995 Fax 734095-3731

Samples were advocated depoty to A.75 by Pall Corporation staff. Stepsies were recoved with proper chain of centrally resents architect. Sample continues assemble, if Sample continues and contently, if sample presented on the "Sample Recognition of the Complete Contently and the Complete Contently and the Complete Contently and the Co

Data Review and Approval

contained in this report have been generated in soundance with guidelines provided in the referenced test method, and are consistent with deatled precedures described in a written standed operating, and (ON) specific in the ATE Laboratory, or required by USEATA. Add asks are per and management of the method compliance with the above retrieved SOPP and project specifications. In addition, all data to the theoretical youlgary Assessment 2018/10 Centric Manager.

This data package constitutes a Level II package; other data report packages (Level I, Level IV DVP, EPA RS EDD) are available upon request. There were no hardcopy data annumery absent generated for this project.

Sample Analysis

<u>I.4.Diezmot Ambria (GCMS)</u>: Samples were analyzed by purge and tap GCMS in accordance with USEPA method 16:14 (Volutile Organic Compounds by Indeepe Dilution (In a Chromoslography – Mana Spectmentry). A initial calibration with at least five (volves was end to quantitate 1,4-Diazane. Samples were reported to project specific reporting limits. Samples were reported as mg/L.

Analytical OA/OC Summary

Method calibration was verified frough the analysis of a mid-level initial calibration verification (CV) attended at a frequency of every 12 hours. All verification standards not the acceptance criteria with the following exceptions:

Nate

Nate

Instrument Blanks

OA/OC Batch Summary

Internal Standards

Laboratory Reagent Blanks

A laboratory respect blank (LRIS) was analyzed with each QAQC batch. The LRIS's rec (the acceptance criteria with the following exceptions:

Name

Name

A laboratory fortified blenk (LFII) was analyzed with each QA/QC batch. The LFII's met the succeptance criteria with the following succeptance:

Note:

Note:

Matrix Spikes and Spike Duplicates

A matrix spike (MS) and matrix spike duplicate (MSD) was analyzed with each QA/QC batch. The MS/MSD's met the acceptance criteria with the following exceptions:

Matrix Replicates

A matrix spike (MS) and matrix spike deplicate (MSD) was analyzed with each QA/QC batch. The replicates met the acceptance criteria with the following exceptions:

Near

Sample Dilutions

- * Red Food 205/22 * TW-24 2/24/22
- TW-22 2/24/22
- TW-11d 2/24/22
 MW-1 Replacement

Markalitong

Mark T. Del.ong (Quality Assurance Coordinator)

Starts.

Philip B. Simon (Laboratory Director)

/ February 28, 2022

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ANN ARBOR TECHNICAL SERVICES, INC.

QUALITY ASSURANCE / QUALITY CONTROL SUMMARY LABORATORY ACCURACY SUMMARY

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ANN ARBOR TECHNICAL SERVICES, INC.

QUALITY ASSURANCE / QUALITY CONTROL SUMMARY LABORATORY ACCURACY SUMMARY

Wetod.	n:e	PA 1624										
GAGC BIRCH NA	nter. OCO	RG1221221										
EDG	¢225	221										
Project Number	G301	-002.22										
	Duplicate	MSD)	Dance have	GAS GAS I	Eargle Corondator	fighe Added	Ukerand Constraint	Units	 Perset Factory	LCL	ıa	Corres

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ANN ARBOR TECHNICAL SERVICES, INC.

QUALITY ASSURANCE / QUALITY CONTROL SUMMARY

				ABONATORT PRECISION 30	E-EURIT 1						
Merce	USE	PATER									
OAGC BANK No	inter 000	FGC225221									
500	0225	221									
Project Numbers	G001	-002.22									
Report Date	322	222									
-											
Matrix Spike	(MS) / Mab	rtx Spike D	uplicate (MSD)								
Let Earpe D	Armynia Date	Analysis Time	Drenkal Name	cus	Pan.h	Mean	Unio	1	119	Curtol	Correct
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CC25221-12 MCC2	02257022	1255 44	1.4-Conserve	123-91-1	6.604	6.401	col	Wist.	172	20	

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ANN ARBOR TECHNICAL SERVICES, INC.

QUALITY ASSURANCE / QUALITY CONTROL SUMMARY LABORATORY BLANK SUMMARY

Metod	USEPA	1524									
QAOC Earth Number	er books	32225221									
503	022522	1									
Project Number	G001-0	02.22									
Report Date:	32.702	2									
			Method Blank (M	6)			_	_			
Leboratory Rea	gent Blan	ık (LRB) /		6)	CAS .	Face	los	tus	Wested Defection Limit	Reporting Delectors Limit	Commerts

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ANN ARBOR TECHNICAL SERVICES, INC.

LABORATORY ACCURACY SUNMARY

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Office: 734-005-0

AUS. 1,4-Dioxane by GC/MS Data Summary Sheet 1,4-Dioxane by GC/MS Data Summary Sheet 1,4-Dioxane by GC/MS Date Summary Sheet ATS Project Number
ATS BOD Number
Client Remple ID
Laboratory Sample ID
Matrix
Sample Data
Analytical Method (USEPA)
Preparation Method (USEPA)
CC Batch Number ND 0.001 الخالم 1,4-Dioxane by GC/MS Data Summary Sheet 1,4-Dioxane by GC/MS Data Summary Sheet 0.005 0.001 PQL Dual
 Parameter
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1,4-Dioxane by GC/MS Data Summary Sheet 1,4-Dioxane by GC/MS Date Summary Sheet 1,4-Dioxane by GC/MS Data Summary Sheet 1,4-Dioxane by GC/MS Data Summary Sheet ATS Project Number
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Citient Earnjale ID
Listoratory Bample ID
Matrix
Sample Date
Analytical Mathod (USEPA)
Preparation Method (USEPA) CASS Result MDL PQL Gual 123-01-1 2.4 0.04 M Parameter 1,4-Digrame Office: 734-895-0915 Fax: 734-995-3731 wish. 1,4-Dioxane by GC/MS Data Summary Sheet 1,4-Dioxane by GC/MS CASS Result MDL POL Gust 122-01-1 0.29 0.01 M Parameter 1.4-Dissans 1.0 0.00 M

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Data Transmittal Cover Page

Project Name: Pall Corporation ATS Project Number: G001-002
ATS Report Number(s): Inorg_SRF_0228221
Client PO Number: 4505089688

Project Description: This data report contains the results of 8 water samples, raceived by ATS on February 28, 2022 to be analyzed for 1,4-Dioxano.

ditional Messag Katle Sirchauer		prilerson, Keith	734-995-3731 (keth_patterson()	idd@AnaArborTechnicalSenses.com ippill.com). Brede, Jim (jim. brode@pail.com) rrs, Sue Pelers (sue, peters@pail.com)
Sans Ittional Messag Catle Sirchauer	Copy report to (Astrohouer@fiveng.co	FAX Number: a: Patterson, Keith am), recoda (8N-op	734-995-3731 (keth_patterson()	pall.com), Brode, Jim (Jim brode@pull.com)
Catle Sirchauer	(kstrohauer@freng.co	om), rwoods@N-op		
e: 3/7/2		Staned:	349	fa

IF YOU DO NOT RECEIVE ALL PAGES OF THIS TRANSMITTAL PLEASE CALL 734-995-0995.

A laboratory firstified blank (I,PII) was enalyzed with each QAQC bascle. The LPII's mot the acceptance criteria with the following exceptions:

None
Name

/ March 7, 2022

Laboratory Fertified Blanks / Laboratory Control Samples

Matrix Spikes and Spike Duplicates

Matrix Replicates

Sample Dilutions

Markalatong

2.875.2 Philip D. Simon (Laboratory Director)

Mark T. DeLong (Quality Assurance Coordinator)



ORGANIC ANALYSIS 1,4-Dioxane by GC/MS USEPA 1624

ATS Project Number: G001-002.22 ATS SDG: 0228221

Prepared By: Ann Arbor Technical Services, Inc. 290 South Wagner Road Ann Arbor, MI 48103

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Name of Street, or other Persons and Street,

LABORATORY OPERATIONS CASE NARRATIVE

ATS Project Number: G001-002 Report Date: 3/7/22 SRF / SDG Number(s): 0228221 Client PO Number: 4505089688

Case Narrative Summary

This case narrative applies to the following 8 samples that were received at Ann Arbor Technical Services, Inc. (ATS) on 2/28/22, and associated matrix-specific QA/QC:

annitries.				
Client Sample Identification	Sample Date	Requested Time Assured Time	Analysis	Mairie
Received 2/28/22	-	1-6-		
On(6/100)	2/71/02	Urgeti	1,4-Dirrane	Water
Red Pond	2/28/22	Urgest	1,4-Diusane	Water
Combination Pfflorni	2/29/22	Urgret	1,4-Dioxane	Water
INT-OC-Ia	20102	Urgent	1,4-Diurane	Water
Hrt-OC-2x	20102	Urgent	1,4-Direxares	Water
10-1	2/24/22	Hyeni	1,4-Disvase	Water
Detfull Grab	2/28/22	Urpeni	1,4-Direase	Winer
Quifall Tesi	3/38/22	Urpent	1.4-Diorson	Water

Upon receipt samples were scheduled for the following analyses

Analysis

1,4-Dissane (USBPA 1624) – Urgma TAT

Samples + 1 Matrix Spike + 1 Matrix Spike Duplicate

Year Una lais

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ARBOR TECHNICAL

Sample Receipt, Chain of Custody Records, and Holding Times

Samples were delivered directly to ATS by Pol Corporation staff. Samples were nearlyed with proper chain of caselog crowds included. Sample continued and caselog crowds included. Sample continued and caselog cold control presented in the "sample filtered" of the caselog control case control case control case control case control case control case control case control case control case control case caselog casel

0001-00231/CN_0220231.dec

Consultauts in Chemistry & Environmental Science 200 South Wagner Road, Ann Arbor, Nichigan 48103 Tel 734(905-0905 Fax 734(905-373)

Data Review and Approval

All data notisated in this report have been generated in accordance with guidelines poweled in the referenced another feet method, when consistent with detailed procedures described in a written standed operating procedures (EOI) by Control to the ATS Laboratory, as reported by UEDFA. All data are per and management reviewed in minus compliance with the above softenced 50°F and project specifications. In addition, all data conform in the laborative Coultry Country C

A zingle QA/QC batch is defined as no more than 20 samples excluding method blanks (MB, LRII), fortified blank (BS, LFB, LCS), matrix spikes (MS, SPK), and doplicates whether spiked or native (MSD, SPK DUP, DUP, LR).

Data Deliverables

This data package constitutes a Level II package; other data report packages (Level I, Level IV DVP, EPARS EDD) are available upon request. There were no hardcopy data summary sheets generated for this project.

Sample Analysis

1.4.Diovano Analysis (ICOMS): Samples were analyzed by pauge and pap CCMS in accordance with USEPA method USAI (Volutile Organic Campounds by batopic Dilutins Gas Chromatography — Meas Spectrometry). A initial calibration with at least five loved was used to quantizes 1,4-Diovano. Samples were reported to project specific reporting times. Samples were reported as regif.

Analytical OA/OC Summary

Calibration Verification

Method calibration was verified through the soulysis of a mid-lavel latini calibration verification (CV) standard at a frequency of every 12 hours. All verification enautands not the acceptance criteria with the following exceptions:

Name
Instrument Blonky

Low system background was demonstrated through the enalysis of instrument blanks at a minimum of every 12-hours. All instrument blanks that the acceptance criteria with the following exceptions:

Name

QA/OC Batch Summary

Internal Standards

Internal standards areas and retention times met the acceptance criteria with the following except.

None

Laboratory Reagent Blanks

A laboratory reagent black (LRB) was analyzed with each QA/QC batch. The LRB's met the acceptance content with the following exceptions:

Name
Name

G001-002.21/CN 0220221.dec

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ANN ARBOR TECHNICAL SERVICES,

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ORGANIC ANALYSIS 1,4-Dioxane by GC/MS **USEPA 1624**

ATS Project Number: G001-002.22 ATS SDG: 0301221

Prepared By: Ann Arbor Technical Services, 290 South Wagner Road Ann Arbor, MI 48103



LABORATORY OPERATIONS CASE NARRATIVE

ATS Project Number: G001-002 Report Date: 3/7/22 SRF / SDG Number(s): 0301221 Client PO Number: 4505089688

Seat 200 113 mpl line from Samely LD 100.

ANN ARBOR TECHNICAL SERVICES, INC.

Case Narrative Summary

This case narrative applies to the following 12 samples that w (ATS) on 3/1/22, and associated matrix-specific QAQC:

empler	-			
Client Sample Identification	r Sample Identification Sample Date Regis		Analysis.	Mairie
Received 3/1/22			-	
Outfall 601	2/28/22	Digen	1,4-Direase	Water
Red Ford	1/1/22	Urgent	1,4-Diesaue	Weigh
Combination Effluent	1/1/22	thyent	1,4-Durane	Water
Ittr-oc-is	3/1/22	Digent	1,4-Distance	Water
PIF-OC-Za	3/1/22	Dignit	1,4-Dissane	Water
100-1	3/1/22	Urgent	1,4-Divene	Water
Cutfall Grab	1/1/22	Ulgent	1,4-Dioxane	Water
Ontfell Test	1/1/22	Urgent	1,4-Dintage	Walne
MW-1424	2/28/22	Swedard	1,4-Dioxane	Water
MW-142s	2/28/27	Statulard	1,4-Distance	Water
MW-1458	2/26/22	Standard	1,4-Diswane	Wyper
MW-14%	20122	Shedend	1,4-Distance	Water

Analyzis	Number of Samples
 I,4-Dioxane (USEPA 1624) – Urgent TAT 	. # Samples + 1 Matrix Spike + 1 Matrix Spike Duplican
. 1,4-Dioxene (USEPA 1624) - Standard TAT	- 4 Samples

Sample Receipt, Chain of Custody Records, and Holding Times

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ANN ARBOR TECHNICAL SERVICES,

were delivered directly to ATS by Pall Corporation staff. Samples were see econds included. Sample condition and anomalies, if any, are either present of the region of a fits comments on individual data shocts. All samples were with the following exceptions:

Data Review and Approval

Data Deliverables

This data package constitutes a Level II package; other data report packages (Level I, Level IV DVP, EPA RS EDD) are available upon request. There were no handcopy data summary sheets generated for this project.

Sample Analysis

Analytical OA/QC Summary

Calibration Verification

Instrument Blanks

Low system background was demonstrated through the analysis of instrument blanks at a minimum of every 12 bours. All instrument blanks met the acceptance enteria with the following exceptions:



Ann Arbert, Managa Atlant Ann Arbert, Managa Atlant Yes Fabryah See Fab 7504

Data Transmittal Cover Page

Project Name: Pall Corporation ATS Project Number: G001-002 ATS Report Number(s): Inorg_SRF_0301221 Client PO Number: 4505089688

Recipient	Mr. Gage Trendel	_	Email: FAX Number:	case_trende1@colf.com
No. of Pag	es (including cover pg.):	_24		
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3/7/22

IF YOU DO NOT RECEIVE ALL PAGES OF THIS TRANSMITTAL PLEASE CALL 734-005-0005.

K (Good-day 22 Octa, Transmittal, Cover, Page \$15 de

OA/OC Batch Summary

Internal Standards

Laboratory Reagent Blanks

A laboratory reagest blank (LRB) was analyzed with each QAQC batch. The LRB's met fits acc with the following exceptions:

Name

Name

Laboratory Fortified Blanks / Laboratory Control Samples

A laboratory fortified blank (LPII) was malyzed with each QAQC batch. The LPII's met the acceptance enterts with the following exceptions:

None
None

Matrix Spikes and Spike Duplicates

A matrix spike (MS) and matrix spike duplicate (MSD) was snalyted with each QA/QC batch. The MS/MSD's one the acceptance criteria with the following exceptions:

None

None

Matrix Replicates

A matrix spike (MS) and matrix spike duplicate (MSD) was soulyzed with each QA/QC betch. The replicate and the acceptance criteria with the following exceptions:

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Name

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ANN ARBOR TECHNICAL SERVICES, INC.

QUALITY ASSURANCE / QUALITY CONTROL SUMMARY

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WOO BUILD N	moer occ	PGC301221											
100	8361												
roject Number		402.22											
Report Date:	372	122											
Antrix Spike	(MS)												
Lat Large D	Arelyse Date	Analysis Time	Chemical Name	cus	Sample Consideration	Spks	Mean,red Concernation	Line		Ferrer!	10.	ua.	Date
COUNTY NO	63012523	18.25.48	1,4 Distante	133-61-1	0.460	0.800	1.21	Pol.	Viet	63.3	80	122	
Printers and	Part Court	424	(remark	West	2400	18.0	141	ne.	1.46	*2.3	40	w	

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ANN ARBOR TECHNICAL SERVICES, INC.

Hetod:	USEPA 1824									
OAGC Basin Number:	QCQN/56301221									
503	6301221									
Project Number:	6001-002.22									
Report Date:	37/2023									
Watrix Spike Dupi	icate (MSO)									
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Lat Earlie D. Avey	sa Cafe Aralysis Time Chemical Name									

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ANN ARBOR TECHNICAL SERVICES, INC.

QUALITY ASSURANCE / QUALITY CONTROL SUMMARY

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ONDC BASH NA	meer oco	500001221										
spa	0331	221										
Project Number:	G001	-002.22										
Report Date:	370	022										
Matrix Spike	1	10000	Opplicate (MSD)		cus	feat	Vest	0-6	1	177	Cores Line	Quite
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Comments

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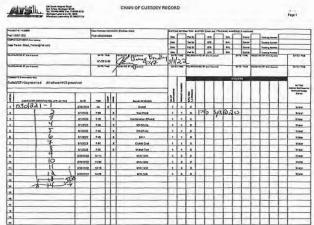
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V. Indiana provided by the black and sample fillules.









ANN ARBOR TECHNICAL SERVICES, INC.

QUALITY ASSURANCE / QUALITY CONTROL SUMMARY

				DABORATURI BLAN	N SURE	W.I.				
Metrod:	USEPA 16	24								
GVCC Each Number	COORDE	01221								
800	0351221									
Project Number:	G301-022	22								
Report Date:	37/2022									
Laboratory Reage	ent Blank	LRB)/	Method Blank (MB)							
Lab Sample O Arely	sh Date Ares	es Tre	Chemical Name	cus	Fine	U-is	tes	Wated Canada brit	Reporting Detection Limit	Quite
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Copy report to: Patterson, Kelih (kelih patterson/lipuli.com), Drodo, Jim (jim, stantrijfheng.com), neodis/Eh-coperations, com, Pelans, Sue Pelces (sue pelansis stantalis/Epoli.com)



ORGANIC ANALYSIS 1,4-Dioxane by GC/MS USEPA 1624

ATS Project Number: G001-002.22 ATS SDG: 0302221

Prepared By: Ann Arbor Technical Services 290 South Wagner Road Ann Arbor, MI 48103



LABORATORY OPERATIONS CASE NARRATIVE

ATS Project Number: G001-002 Report Date: 3/7/22 SRF / SDG Number(s): 0302221 Client PO Number: 4505089688

Case Narrative Summary

This case nurrative applies to the following B samples that were received at Ann Arbor Technical Services, Inc. (ATS) on 3/2/22, and associated matrix-specific QA/QC:

Client Sample identification	Sample Date	Requested Turn Around Time	Analysis	Maltie
Received 1/2/22				
Ontest 001	MI/22	Urgest	1,4-Dinzane	Water
Red Pond	3/2/22	Urgess	1,4-Distance	Water
Combination Hillurest	1002	Urgent	1,4-Dinsare	Water
PIT-OC-IN	3/2/22	Urgent	1,4-Dinsane	Water
RIT-OC-3a	1002	Urgoni	1,4-Dimeter	Water
119-1	1/2/22	Urgest	1,4-Diesane	Water
Outfall Grah	3/2/22	Orgent	1,4-Disrape	Water
Outbit Test	1/2/22	Hereni	1.4-Diorecc	Water

Upon receipt samples were scheduled for the following analyses.

o (USSPA 1624) - Urgent TAT * 8 Samples * 1 Maters Spike 1 Marcis Spike Duplicate

Sample Receipt, Chain of Custody Records, and Holding Times

Samples were delivered directly to ATS by Pull Corporation staff. Samples were secrived with proper ele-cistody records included. Sample condition and anomalies, if my, we either pressited in the "Sample Ray section of this report or in the comments on individual data sheets. All samples were propered and the

Consultants in Chemistry & Environmental Science 290 South Wagner Road, Ann Arbor, Victigan 48103 Tel 734/95-09/6 Fax 734/995-3731

Data Review and Approval

All date contained in this report have been generated in accordance with guidelines provided in the standard test method, and are consistent with detailed percedures described in a writes standard procedures (SOP) specific to the ATS Lobantons, a required by ISEPA. All data separe and reviewed to exastic compliance with the above referenced SOPs and project specifications. In ad-continue to the Montainsty Quality Assentance (Quality Control Manuals.

A single QA/QC batch is defined as no more than 20 samples excitating method blanks (MB, LRB), fartified blanks (BS, LFB, LCS), matrix spikes (MS, SFK), and displicates whether spiked or native (MSD, SFK DUP, DUP, LR).

Sample Analysis

Analytical OA/OC Summary

Calibration Verification

Method calibration was verified through the analysis of a mid-level initial calibration verification (CV) standard at a frequency of every 12 hours. All verification standards use the acceptance criteria with the following exceptance:

Note:

Note:
Instrument Hanky

QA/QC Batch Summary

Internal Standards

Laboratory Reagent Blanks

A laboratory reagont black (LRD) was unstyand with each QA/QC batch. The LRD's not the acceptance enterior with the following exceptions:

None

None

0001-002.22/CN_0302221.4m



Laboratory Fortified Blanks / Laboratory Control Samples

A laboratory furtified blank (LFII) was analyzed with each QA/QC batch. The LFB's not the acceptance criteria with the following exceptions:

None

None

Matrix Spikes and Spike Duplicates

A multix spike (MS) and matrix spike duplicate (MSD) was analyzed with earth QA/QC batch. The MS/MSD's met the acceptance enterin with the following exceptions:

None

None

Matrix Replicates

A matrix optic (MS) and matrix spike duplicate (MSD) was analyzed with each QA/QC batch. The replicates met the acceptance criteria with the following exceptions:

None

None

Sample Dilutions

Samples containing compounds at concentrations above the initial calibe those compounds. The following samples were diluted for 1,4-Dioxane:

Markalitong

/ March 7, 2022

Mark T. DeLong (Quality Assurance Coordinator)

S. Engle

/March 7, 2022



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LABORATORY OPERATIONS CASE NARRATIVE

ATS Project Number: G001-002 Report Date: 3/7/22 SRF / SDG Number(s): 0303221 Client PO Number: 4505089688

Case Narrative Summary

This case numerive applies to the following 8 samples that were received at Ann Arbor Technical Services, Inc. (ATS) on 30/22, and associated matrix-specific QAQC:

mples				
Client flample Identification	Sample Deen	Requested Turn Around Time	Arrafysis	Matrix
Received 1/1/22	1			-
Outfell 001	1001	Urgent	1,4-Direase	Water
Ked Pont	1/1/22	Degree	1,4-Dinyane	Water
Condination Efficient	1002	Urgest	1,4-Diocus	Water
18.00-1e	30/77	Urgent	1,4-Dierane	Water
Hit-OC-2s	1002	Ulgent	1,4-Dinnane	Water
TIP-1	3/3/23	Urgent	1,4-Divane	Water
Outfull Gmb	3/1/22	Ugent	1,4-Dissesse	Water
Outfull Test	3/3/22	Ununt	1,4-Dioxane	Water

Upon receipt samples were scheduled for the following analyses.

Apalysis | Number of Samples | 1,4-Distance (USEPA 1634) - Urgent TAT | 1 Samples + 1 Matrix Spike + 1 Matrix Spike Deplicate

Sample Receipt, Chain of Custody Records, and Holding Times

Samples were delivered directly to ATS by Pall Corporation staff. Samples were received with proper chain of cutady records included. Sample condition and assumables, if any, are either presented in the "Sample Receipt section of the report or in the comment to included data sheets. All samples were prepared and unapylaryd within the prepared of the comment to included data sheets. All samples were prepared and unapylaryd within the prepared of the prepared within the prepared and unapylaryd within the prepared and unapylaryd within the prepared of the prepared and unapylaryd within the prepared and unap

Consultance in Chemistry & Environmental Science 280 South Wagner Raid, Ann Actor, Nichigan +8103 Tel 734/955-095 Fex 734/955-3731

Data Review and Approval

All data cointained in this report have been generated in accordance with guidalines provided in the re-standard test method, and are consistent with detailed procedures described in a written standard open-procedures (SOS) specific to the ATS Laboratory, a required by USEPA. All this are per unit man-reviewed to creame compliance with the above referenced SOP's and empirical specifications. In addition confirms to the biotectory's Quilty Assurators (Quality Committee)

A single QA/QC batch is defined as no more than 20 samples excluding method blanks (MB, LRD), fortified blant (RS, LPB, LCS), matrix spikes (MS, SPK), and displicates whether spiked or native (MSD, SPK DUP, DUP, LR).

This data package constitutes a Level II package, other data report packages (Level I, Level IV DVP, EPA R5 IIDD) are available upon request. There were no hardcopy data summary sheets generated for this project.

Sample Analysis

Ld-Distance Analysis (GCMAS). Samples were analysed by parge and trap GCMAS in accordance with USIPA matthed 15c4 (Vehiclic Organic Compounds by Instone Dilution Gue Chamatography - Mess Speciformity). An initial calibration what a least five levels was used to quantilate 1,4-Distance. Samples were reported to project specific reporting limits. Samples were reported as mg/l.

Analytical OA/OC Summary

Calibration Verification

Method calibration was verified through the analysis of a mid-level mittal calibration verification (CV) standard at a fuquency of every 12 hours. All verifications standards met the occeptance criteria with the following exceptance:

None:
None:
Nature Control of the following exceptance:

OA/OC Batch Summary

Internal Standards

Laboratory Reagent Blanks

A laboratory reagons blank (LRII) was analyzed with each QA/QC batch. The LRIP's met the acceptance criteria with the following exceptance:

Name

Name

G001-002.22/CN 9303221-dee





Data Transmittal Cover Page

Project Name: Pall Corporation
ATS Project Number: G001-002
ATS Report Number(s): Inorg_SRF_0303221
Client PO Number: 450508968

Project Description: This data report contains the results of 8 water samples, received by ATS on March 3, 2022 to be analyzed for 1,4-Dioxene.

Recipient: Mr. Gage Trendel gage brendel@cat.com No. of Pages (Including cover pg.): 19 Sarah Stubblefield Email: <u>Sarah Stubblefield@AccArborTechnica/Sinvices</u>

FAX Number: 734-905-3731

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IF YOU DO NOT RECEIVE ALL PAGES OF THIS TRANSMITTAL, PLEASE CALL 734-995-0995

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ORGANIC ANALYSIS 1,4-Dioxane by GC/MS **USEPA 1624**

ATS Project Number: G001-002.22 ATS SDG: 0303221

Prepared By: Ann Arbor Technical Services, Inc. 290 South Wagner Road Ann Arbor, MI 48103

Laboratory Fortified Blanks / Laboratory Control Samples

A lationstory fortified blank (LPB) was analyzed with each QA/QC batch. The LPB's roet the accessible the following exceptions:

Note:

Matrix Spikes and Spike Duplicates

A matrix spike (MS) and matrix spike displicate (MSD) was analyzed with each QA/QC hatck. The MS/MSD's m

Leb Somble His	Contlition	Pertrai Recovery	Acceptance Limit
81003221-3 M/S	1,4-Dintare 1,4-Dintare	140	80-120%
ETETZZI-J MEID			

Matrix Replicates

Sample Diintions

. Red Fond 3/3/22

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Supp.

G001-001-22/CN_0011221-6x



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ANN ARBOR TECHNICAL SERVICES, INC.

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ANN ARBOR TECHNICAL SERVICES, INC. QUALITY ASSURANCE QUALITY CONTROL SUMMAY LABORATIONY PRICESOL SUMMARY

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ANN ARBOR TECHNICAL SERVICES, INC.

Data Transmittal Cover Page

Project Name: Pall Corporation

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X 92201-007-77-Date Transmittel Court Page 51.5 de



ORGANIC ANALYSIS 1,4-Dioxane by GC/MS USEPA 1624

ATS Project Number: G001-002.22 ATS SDG: 0304221



ANN ARBOR TECHNICAL SERVICES, INC.

ALC: III

LABORATORY OPERATIONS CASE NARRATIVE

ATS Project Number: G001-002 Report Date: 3/7/22 SRF / SDG Number(s): 0304221 Client PO Number: 4505089688

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ANN ARBOR TECHNICAL SERVICES, INC.

Case Narrative Summary

Client Sample Identification	Sample Date	Requested Torn Around Time	Attubuse	Materia
Received 1/4/22				-
Ourfull (01)	1/1/23	Urgent	1,4-Disease	Water
Red Pond	3/4/22	Depent	1,4-Diesane	Water
Combination Pffluent	3/4/22	Urgent	1,4-Dioxese	Water
98-1	3/4/22	Urgret	1,4-Diotane	Water
Outfall Grain	3/4/22	Dirgens	1,4-Direant	Water
Ostfall Test	3/4/22	Urgent	1,4-Diesane	Water
MW-1414	3/3/22	Stendard	1,4-Dissane	Water
MW-146	3002	Standard	1,4-Dierane	Water
MW-1444	1/1/22	Standard	1,4-Dioxane	Water
MW-1441	1/3/22	Standard	1,4-Dierste	Water
Victor a Los	1000	Front of		*16



ANN ARBOR TECHNICAL SERVICES, INC.

QUALITY ASSURANCE / QUALITY CONTROL SUMMARY

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100	0334	1221								
Project Number:	600	14CZ.22								
Report Date:	37/2	1222								
Laboratory R	eagent Bl	ank (LRB)	Method Blank (MB)							
Let Saryie O	Analysis Date	Analyse Time	Chambril Name		cus	Fan.4	Unio Taxa	Marked December Line	Reporting Determination	Quiter
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ANN ARBOR TECHNICAL SERVICES, INC.

QUALITY ASSURANCE / QUALITY CONTROL SUMMARY LABORATORY ACCURACY SUMMARY

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103	0304221										
Project Number:	G001-002-22										
Report Date:	37/2022										
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Project Number:	G001-002-22											
Report Date:	3/7/2022											
Matrix Spike (MS)											
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ANN ARBOR TECHNICAL SERVICES, INC.

QUALITY ASSURANCE / QUALITY CONTROL SUMMARY LABORATORY ACCURACY SUMMARY

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QAQC Batch Number:	QCQRQ0304221											
500	0304221											
Project faunder:	G001-802.22											
Report Date:	370022											
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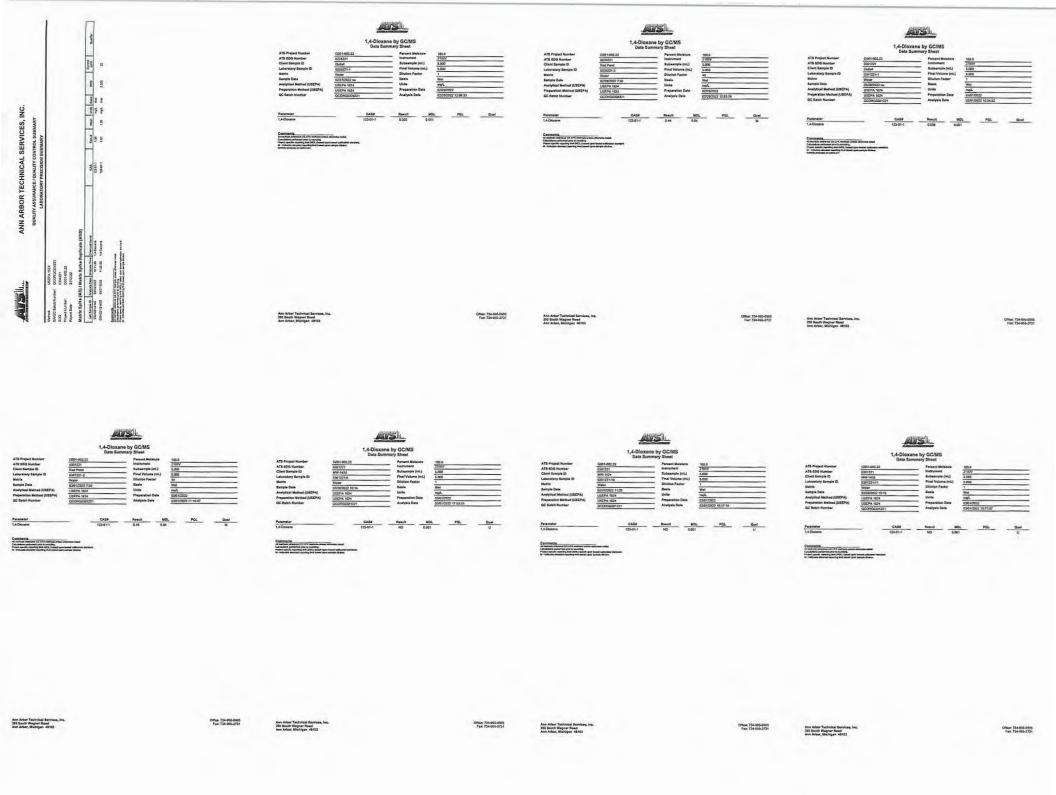
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O; 616.077,1000 | D; 410,787.5144 | F; 516.277,1005

FEV CHURATIONS AND RESQUIRCE MANAGEME 042 S. Wagner Road | Am Arbor | Mr. 45103 0: 616,977,1000 | D: 419,767,5144 | F: 610,977,1005

From: Sent To: Ca Subject



1,4-Dioxane by GC/MS Data Summary Sheet 1,4-Dioxane by GC/MS Data Summary Sheet 1,4-Dioxane by GC/MS Data Summary Sheet 1,4-Dioxane by GC/MS Data Summary Sheet ATS Project Number
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Client Sample ID
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Clent Sample D
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QC Slatch Number CASS Result MDL PQL Qual 125-91-1 0.44 0.04 M CASE Result MDL PQL Qual 123-91-1 0.000 0.001

1,4-Dioxane by GC/MS Data Summary Sheet

1,4-Dioxane by GC/MS Data Summary Sheet

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